REPORT RESUMES

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EFFECTIVENESS OF A SECOND GRADE LANGUAGE ARTS PROGRAM.

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TEACHERS IN SAN DIEGO COUNTY, CALIFORNIA, TESTED THE RELATIVE EFFECTIVENESS OF AN EXPERIENCE APPROACH (EA) AND THE TRADITIONAL METHOD (TM) APPROACH TO THE TEACHING OF LANGUAGE ARTS AT THE SECOND-GRADE LEVEL, CONTINUING A STUDY BEGUN WITH THE SAME PUPILS IN FIRST GRADE THE PREVIOUS YEAR. GOALS OF THE PROJECT WERE TO DETERMINE WHETHER THE RELATIVE EFFECTIVENESS OF THE TWO APPROACHES WOULD BE SUSTAINED THROUGH A SECOND YEAR AND TO INDICATE THEIR EFFECTIVENESS WHEN APPLIED TO SECOND GRADE ONLY. THE EA UTILIZED STORIES AND EXPERIENCES, RELATED BY THE STUDENTS, AS THE PRIMARY BASIS FOR INSTRUCTION, WHEREAS THE TM APPROACH CENTERED AROUND INSTRUCTIONAL MATERIALS SUPPLIED TO THE TEACHERS. STATEMENTS OF CRITERIA AND RATIONALE SERVED AS GUIDELINE DESCRIPTIONS FOR EACH APPROACH, AND COORDINATORS VISITED THE CLASSROOMS REGULARLY TO HELP TEACHERS STAY WITHIN THE STUDY'S DESIGN. OF 34 COMPARISONS ANALYZED, 12 FAVORED THE EA AND 13 THE TM. HOWEVER, AS INSTRUCTION TIME INCREASED, THE EA ENHANCED ACHIEVEMENT IN READING, WRITING, SPEAKING, AND LISTENING SOMEWHAT MORE THAN DID THE TM, AND THE LEVEL OF CONFIDENCE IN THE OBSERVED DIFFERENCES IMPROVED. WITH INSTRUCTION LIMITED TO ONE YEAR, THE NUMBER OF SIGNIFICANT DIFFERENCES WAS COMPARABLE TO THAT FOR TWO YEARS, BUT SUBSTANTIALLY FEWER WERE SIGNIFICANT AT THE .01 LEVEL OF CONFIDENCE. (RD)

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EFFECTIVENESS OF A SECOND GRADE LANGUAGE ARTS PROGRAM

COOPERATIVE RESEARCH PROJECT 3235

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TE 000 007

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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EFFECTIVENESS OF A SECOND GRADE LANGUAGE ARTS PROGRAM

Cooperative Research Project 3235

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Department of Education, San Diego County

San Diego, California

in cooperation with the

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Sacramento, California

1967

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INTRODUCTION

The study reported herein investigated the relative effectiveness of an Experience Approach and the Traditional Method approach to the teaching of language arts in the second grade. The study is a continuation of U.S.O.E. Project 2576 which compared the same methods in the first grade. This report relates the results of the two-year project, as well as data received from students who received the instruction only during the second grade.

The first year's study (U.S.O.E. 2576) was one of 27 first grade studies sponsored by the U. S. Office of Education. The study reported herein is one of 14 which were continued for a second year. Coordination of all studies was under the direction of Dr. Guy Bond and Dr. Robert Dykstra at the University of Minnesota. Instruments employed in the study were selected at a joint meeting of all project directors.

CHAPTER I

PROBLEMS AND OBJECTIVES OF THE STUDY

THE PROBLEM

Language arts instruction has for many years been a vital concern to educators throughout the nation. As rapid changes in technology created the need for more efficient and effective instruction in science and mathematics, the need to re-examine instruction in the language arts became more apparent.

Ten years ago several teachers in San Diego County, working with staff members of the Department of Education, joined forces in an attempt to develop a more effective approach to teaching the language arts. The synthesis of these ideas formed the basis for a program which was called the Creative Writing Approach to the Teaching of Reading. This approach introduced students to writing before reading and utilized the students' production as material for reading instruction.

During the 1959-60 school year three approaches were studied, identified as the Basic Method, the Individualized Method, and the Language Experience Approach, which was the successor to the Creative Writing Approach. Informal evidence indicated a need for a systematic evaluation of these approaches. Commencing in the fall of 1964 a study of first grade language arts instruction was launched to determine the relative effectiveness of the Experience Approach and the Traditional Method (Basic Method). The study, one of 27 investigating first grade instruction across the nation, revealed certain significant differences which led to a continuation of the study through the second grade.

THE OBJECTIVES

The present study was designed to determine whether the relative effectiveness of the two approaches would be sustained through a second year of the specified instruction. The study would also indicate the effectiveness of the approaches when applied to second grade only. To accomplish this end, four areas of the language arts were separately measured—namely, reading, writing, listening, and speaking. In addition, an assessment was made of reading interest and pupil attitude toward reading.

Answers to the following questions were sought for students who were part of the continuing population as well as for those exposed to the teaching modes only during the second grade.

1. Which of the two methods tested produced a significant difference in reading achievement?

2. Which method produced a significant difference in listening?

3. Which method produced a significant difference in speaking?

4. Which method produced a significant difference in writing?

5. Which method produced a significant difference in attitude toward reading?

6. Which method produced a significant difference in interest in reading?

7. Which method is most appropriate for students of different socio-economic levels?

8. Which method is most appropriate for boys?

9. Which method is most appropriate for girls?

Since the investigation placed primary emphasis on instruction in the language arts, measures were employed to determine whether heavy emphasis in one area of the curriculum affected achievement in the other areas.

CHAPTER II

REVIEW OF RELATED RESEARCH

The present investigation shares with several other research inquiries the characteristic of continuing to study on a longitudinal basis the achievement of second grade children subjected to given methods of language arts instruction. This chapter is specifically concerned with those studies which examine the relative effectiveness in first grade of a Language Experience approach to instruction compared with other approaches. All of the investigations were supported by funds from the U. S. Office of Education Cooperative Research Branch and all used the same test batteries and measures. The studies were coordinated by the Coordinating Center for the Cooperative Research Program at the University of Minnesota.

Although it is not possible to demonstrate that the procedures conducted under the rubric Language Experience approach are necessarily the same or equivalent from study to study, a reasonable bond of commonality is assumed for the basis of these comparisons. Since the Traditional Method of reading instruction typically results in grouping children within the classroom, methods which do not so group them may be judged on the basis of this organizational characteristic. One study relative to this concern, though not dealing specifically with the Language Experience method of instruction, was conducted by Sister M. Marita[1] at Marquette University. She studied beginning achievement in three classroom organization patterns: (1) modified-individualized organization pattern; (2) a three-to-five group pattern; and (3) a whole class "child-centered" pattern. This study involved 32 teachers and 810 heterogeneously grouped first grade children. Pre and post measures of performance were taken. A cautious conclusion drawn from this study suggests that the "whole class" organization pattern in a child-centered context might be as meaningful an approach as either of the other two organizational patterns.

Stauffer[2] compared the effectiveness of a Language Arts approach to a Basic Reader approach in first grade reading instruction. Full pretest and posttest analyses were made of 433 students in 20 first grade classrooms in 3 towns in Southern Delaware. The pretests and posttests used were those agreed upon by project directors. Results of the statistical analyses were as follows: On the Stanford Achievement battery only, the experimental population using the Language Arts approach earned significantly (.01 level) higher scores than the control population on Word Reading, Paragraph Meaning, and Spelling. Controls did better (.01 level) on Arithmetic. Experimental group boys scored higher (.01 level) than control boys on Word Reading and Paragraph Meaning. Control boys performed better in Arithmetic. Experimental group girls excelled on Word Reading, Paragraph Meaning, and Spelling. Control group girls excelled on Arithmetic. There were no differences between experimental and control groups in Attitude Toward Reading. The experimental population scored higher in tests of Oral Reading on Accuracy, but not on Rate. On three measures of Word Recognition Ability, the experimental random population scored higher than did controls. Experimental random population was also superior on measures of Written Language, that is, Writing Mechanics, Spelling, and Total Number of Running Words.

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[1] Marita, Sister M. "Beginning Reading Achievement in Three Classroom Organizational Patterns." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 12-17.

[2] Stauffer, Russell G. "The Effectiveness of Language Arts and Basic Reader Approaches to First Grade Reading Instruction." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 18-24.

The experimental population, while superior in each of the areas of the Written Language test when readiness and intelligence were held constant, scored significantly better on all measures except Word Study Skills in the Stanford Achievement battery and on Rate of Oral Reading. Of the pretest measures reported, the test of intelligence (Pintner-Cunningham) provided the best prediction of success in Reading, Spelling, Vocabulary, and Arithmetic. The two readiness tests provided significant predictive evidence for the experimental population. One hundred days or more of kindergarten experience were differentiating, and especially so for the experimental population. Children in above-average and average groups taught by the Language Experience approach excelled those taught by the Basic Reading approach. The unsegregated experimental population performed significantly better on all tests than did the controls. Both approaches produced achievement records compatible with the Stanford Achievement standardization population. The Language Experience approach did not sufficiently influence achievement of the segregated Negro population to avoid having their performance materially influence the mean achievement scores of the total experimental population. In general, this study concludes that the Language Arts approach is an effective method of first grade instruction.

Vilscek, Morgan, and Cleland[3] in Pittsburgh, Pennsylvania, examined the effects and outcomes of the Coordinated Basal Language Arts approach and the Integrated Experience approach to communication on the language development of pupils. Subjects were approximately 750 pupils in 24 classes representing 3 socio-economic levels. The pupils, whose IQ's ranged from 80 to 170, were randomly assigned to the two instructional approaches. Multivariate and univariate analysis of variance was performed on the basis of initial readiness test scores, mental age scores, scores on the Hollingshead-Redlich index of social position, and on teacher competence and class size. Twenty-six categories of scores from tests administered at the conclusion of the experiment comprised the criterion variables considered in the three main effects and four interaction hypotheses. The final total population was approximately 591. Preliminary findings on the univariate analysis of the variance are as follows:

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[3] Vilscek, Elaine; Morgan, Lorraine; and Cleland, Donald. "Coordinating and Integrating Language Arts Instruction in First Grade." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 31-37.

1. Pupils in the Integrated Experience approach had significantly (.01 level) higher mean scores than pupils in the Coordinated Basal Language Arts approach on Word Meaning, Paragraph Meaning, Vocabulary, and Word Study in the Stanford Achievement battery and on the San Diego County Pupil Attitude Inventory.

2. Pupils in the Integrated Experience approach also had significantly (.05 level) higher scores than pupils in the Coordinated Basal Language Arts approach on the Gates and Karlsen Word Lists, Creative Writing Mechanics Ratio, and the Flexibility and Elaboration Indices of the Product Improvement Task, Minnesota Tests of Creative Thinking.

3. Significant (.01 level) differences also appeared between pupils in the upper levels versus those in the middle and lower levels on all portions of the Stanford Achievement Tests, the University of Pittsburgh Diagnostic Rating of Language Outcomes for First Graders, Flexibility and Elaboration Indices of the Figure Completion Tasks, Minnesota Tests of Creative Thinking, and the Gates Word List.

4. Girls had significantly (.01 level) higher measures than boys on Word Meaning, Paragraph Meaning, Spelling, and Word Study sections of the Stanford battery, the Diagnostic Rating of Language Outcomes for First Graders, the Gilmore Oral Reading Test Rate Assessment, and the Fluency Index of the Product Improvement Task, Minnesota Tests of Creative Thinking.

5. Statistically significant interactions were apparent between sex and socio-economic level and sex by socio-economic level by method at .05 and .01 levels respectively on the Paragraph Meaning portion of the Stanford Achievement Tests. At each socio-economic level, girls in the Integrated Experience approach had higher mean scores on all but the Spelling portion of the Stanford Achievement Tests than did girls in the Basic Language Arts approach. Boys in the upper and middle socio-economic levels in the Integrated Experience approach had higher mean scores than boys in the Basic Language Arts approach on all portions of the Stanford Achievement Tests. At the lower socio-economic levels, boys in the Coordinated Basal Language Arts approach had higher mean scores than boys in the Integrated Experience approach. This latter finding is attributed to considerably higher initial readiness scores.

6. Comparable patterns of mean achievement by sex and socio-economic levels were noted on the Gilmore, Fry, Gates, and Karlsen tests.

Hahn[4] studied three approaches to beginning reading instruction—ITA, Language Arts, and Basic Readers—in 12 school districts in Oakland County, Michigan. Most of the results are limited to tests administered to all students in May of the school year, which included the Stanford Achievement Test, Primary Battery, and the San Diego County Reading Attitude Test. Individual tests, including the Gilmore Oral Reading Paragraphs, were given to a random sample of about 55 pupils in each approach. Analysis of variance results indicated no clear superiority of one method. For the total population, ITA and the Language Arts approaches gave significantly (.01 level) higher scores than the Basic Reader approach on the Word Reading Test. Language Arts and the Basic Reader approaches produced significantly (.01 level) better spellers. The ITA subjects recognized significantly more words on the Fry (.01 level) and on the Gates (.05 level) Word Lists when given ample time to sound through each word. Capacity-achievement relationships were strongest for the Language Arts group in Paragraph Meaning and for ITA and Language Arts in Word Study. It appears that the Language Arts approach may allow students to make better use of their learning potential in terms of Paragraph Meaning. Although girls and boys had comparable test scores on group data, boys lagged behind girls in reading achievement. Since tests used in the study were administered in traditional orthography, final evaluation of the ITA approach must be postponed until all of the children transfer to traditional print.

Reid and Beltramo[5] studied various methods of beginning reading instruction for the low reading group in first grade. Seven methods of instruction were identified: (I) a Language method; (II) a Letter-Sounds method; (III) a Literature method; (IV) a Skills Development method; (V) a combination of methods (I) and (II); (VI) a combination of methods (I) and (III); and (VII) a combination of methods (I) and (IV). In each of the combinations writing was included through the Language method. Subjects in this investigation were 424 children beginning first grade in Cedar Rapids, Iowa, Public Schools. They became eligible subjects on the basis of scores at or below the 60th percentile on the Metropolitan Readiness Test, Form A. Fifty-one classrooms having at least six and not more than twelve pupils so categorized were included in the study. During the first semester each of the 51 groups received 35 minutes daily of teacher-directed instruction in their respective methods. At midyear all children were to start in the basal reading program. However, since some of the first semester methods did not include a guided experience with books, a two-week transitional period of instruction to introduce hardback books was deemed necessary. Among the tests administered at the beginning of the year was the WISC, which yielded a range of 70-126 with a median of 97 on the verbal portion (mean IQ—95.7). At midyear a specially constructed battery of tests was given to all pupils to measure gain. End-of-the-year testing (May) for the 309 remaining pupils was centered on the Stanford Achievement Test, Primary I battery (excluding Arithmetic). A sample of 20 randomly selected pupils from each of the 7 first semester methods were individually tested on the Gates Word Recognition, the Fry Oral Reading Test of Phonetically Regular Words, and the Gilmore Oral Reading Test.

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[4] Hahn, Harry T. "Three Approaches to Beginning Reading Instruction—ITA, Language Arts and Basic Readers." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 590-94.

[5] Reid, Hale C., and Beltramo, Louise. "Teaching Reading to the Low Group in the First Grade." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 601-05.

Results were analyzed by analysis of covariance. Of the seven methods studied, method (VII), that is, the combination of Language and Skills Development methods, produced the best results on midyear tests. Method (III), the Literature method, ranked lowest on these tests. There was only one significant difference on the Stanford Achievement Test at the end of the year—Word Study Skills: method (I) over method (VI). The results appear to support the original hypothesis that no one method would prove markedly superior in all aspects of reading achievement measured by the Stanford Achievement Test.

In a study of disadvantaged children in New York City, Harris and Serwer[6] compared the effectiveness of a skill-centered approach and a language experience approach. Each of these was tried with two variations making four treatment methods in all: (a) a skill-centered method using basal readers; (b) a skill-centered method utilizing basal readers, but substituting the phonovisual method of teaching word attack skills for the word attack lessons accompanying the basal reader; (c) a language experience method in which the beginning reading materials were developed from the oral language of the children; and (d) a language experience method with heavy supplementation of audio-visual procedures. This project, known as CRAFT, was focused on 12 elementary schools having a very high percentage of Negro children, a minimum of 6 first grade classrooms, and evidence of cultural deprivation and marked retardation in previous surveys of reading ability. In the 48 classes, 1146 pupils remained to the conclusion of first grade testing. An additional feature of this investigation was the administration of the San Diego Inventory of Approaches to the Teaching of Reading at the first session of the in-service course and at the last session. Changes in approaches to methodology on reading revealed by this instrument were computed and analyzed in the report.

In order to eliminate the influence of differences among classes in reading readiness, a special analysis of the covariance program was written using multiple covariates and unequal numbers of cases. The five Stanford Primary I Subtests, the Gilmore Oral Reading Accuracy grade score, and the Gates Word

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[6] Harris, Albert J., and Serwer, Blanche L. "Comparing Reading Approaches in First Grade Teaching with Disadvantaged Children." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 631+.

Pronunciation Test were subjected to analysis of covariance using four pretests, and the means of the 48 classes were adjusted for these seven measures. The covariance program failed to work for technical reasons on the other individual measures. Analyses of variance were then computed. The nine schools with full-session, 5-hour days were separated from the schools with split-session, 4-hour days and significant differences in favor of the full-session classes resulted in the major comparisons being based on full-session classes only.

Among the tentative conclusions drawn from the first year of the study are the following:

1. Most disadvantaged first grade Negro children can make substantial progress in learning how to read.

2. Disadvantaged urban Negro children can learn to read by the same methods that work with middle-class white children. Although they begin with extremely poor auditory perception skills, limited vocabularies, and other readiness handicaps, they can respond to superior teaching with good learning.

3. The basal reader method employed in the project held a slight lead among the four methods at the first grade measuring point. It was associated with slightly but significantly highest results in meaningful silent reading comprehension. This method was also highest on the San Diego Inventory of Pupil Attitude. The basal reader approach was relatively less impaired in the split-session schools than was the audio-visual method.

4. The scores on phonovisual method were inferior to those of the basal reader method in Paragraph Meaning and not significantly different on Word Recognition Tests. The phonovisual method earned the lowest scores of the four methods on the San Diego Inventory of Reading Attitudes.

5. The language experience approach with audio-visual supplementation showed significantly higher scores on several tests than did the language experience method without audio-visual supplementation. In grade level scores the audio-visual method matched the means of the skill-centered approach on most of the reading tests and was slightly higher on one test.

6. The language experience method with audio-visual supplementation matched the skill-centered results. The author suggests that the slight significant lead of the skill-centered approach over the language experience approach may be due to a relatively poor showing of the latter and feels these differences might well disappear or be reversed during the second grade study.

7. Achievement in both approaches was considerably lower in split-session classes than in full-session classes.

8. Adequate control of instructional time proved very difficult. There were both wide differences in instructional time within each method and significant differences between the approaches. Since there was a large difference in the amount of time spent on direct reading activities in the two approaches and since this control variable was positively correlated with outcome measures, small differences among methods may be considered inconclusive pending the outcome of the continuation and replication studies now in progress.

Since sex differences in achievement are commonly noted in the literature, a study reported by Wyatt[7] is of interest. She points out that as they are now constituted, schools function as sex-neutral institutions. The problem set for this study was to determine whether sex differences in learning could be recognized and utilized in order to increase reading achievement of first grade boys.

Two experimental groups and one control group, each consisting of 10 first grade classes, were used. There were 633 subjects in the sample. The three treatment groups were roughly equated on such teacher variables as age, experience in teaching, and college preparation. They were also equated with respect to such learner variables as age, intelligence, and socio-economic status. In one experimental approach, children in all 10 classes were grouped by sex as well as by ability for reading instruction. Children in a second group of 10 classrooms were approached through a linguistic method of reading instruction. The third group of 10 classes was used as the control group. The teachers in these classes employed ability grouping and used a multibasal approach.

Simple analysis of variance was used to compare the means for treatment groups, for sex groups, and for sex groups within each treatment. A 3 x 3 x 2 factorial design was used to study the effects of the three treatments at three intelligence levels for the two sexes. The criterion for significance of differences employed was the .05 level. Analysis of the readiness test results revealed few differences among boys assigned to the three approaches at the beginning of the instructional period. Significant differences were found only for the Listening subtest of the Metropolitan Readiness Test and for the Thurstone Identical Forms Test. Analysis of the Achievement test results revealed significant differences only on Word Reading of the Stanford Achievement Tests and on the Fry Oral Test of Phonetically Regular Words. It is concluded that neither of the experimental approaches was better than the control approach for boys for any reading skill except Word Reading. For Word Reading the linguistic approach was best, the sex grouping approach next, and the control approach least effective.

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[7] Wyatt, Nita M. "The Reading Achievement of First Grade Boys Versus First Grade Girls." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 661-65.

In the readiness testing, girls had significantly higher scores than boys on the tests measuring auditory discrimination and knowledge of the alphabet. They also had a significantly higher mean than the boys on the Pintner-Cunningham Intelligence Test. Only on the test measuring knowledge of Word Meaning did boys achieve a significantly higher mean score. When the achievement of all girls versus that of all boys was compared at the end of the study, it was found that girls had significantly higher means on the tests of Paragraph Meaning, Spelling, and Word Study. Girls also earned a higher mean on the test of Paragraph Meaning when compared with boys in the same approach. Since girls, in essence, maintained an advantage which they apparently held at the beginning of instruction, the reading achievement lag of the boys may depend upon something other than the teaching method used after the children entered formal reading instruction. Further analysis of the data led to the conclusion that the sex grouping approach was somewhat more effective for boys than the control approach—a small, but consistent finding. For girls, however, the sex grouping approach seemed detrimental.

A study by McCanne[8] sought to determine whether children from Spanish-speaking homes would achieve better in reading English when taught by one of three methods—(a) a conventional English readiness and basal reader (BR) approach, (b) a modified teaching-English-as-a-second-language approach (TESL), or (c) a language experience approach (LEA). Teachers were sought in Colorado school districts who had between 10 and 20 Spanish-speaking pupils in their rooms in addition to some English-speaking pupils, who were willing to participate in a research project, and who met uniform criteria established by the project director. In 21 schools in 15 school districts, 29 teachers were selected. Before being assigned to experimental groups, the teachers completed the Teacher Inventory of Approaches to the Teaching of Reading. Each group was asked to devote one hour per day to the experimental approach with the Spanish-speaking children, either grouped by themselves or grouped with English-speaking children. Additional language activities which were provided by the teacher were reported weekly so that a statistical factor could be applied in the analysis.

The subject sample was not fully representative of all Spanish-speaking people in the Southwest. That is, it was largely from the New Mexican culture group instead of the Mexican immigrant group and was thus more representative of the rural resident population than the urban population. Such differences, however, are not regarded as of great consequence in relation to first grade reading instruction. A factor analysis of posttest scores yielded 10 dependent variables representing combinations of 26 different subtests. The combinations of scores for dependent variables were set up so that the minimum intercorrelation for components of any one dependent variable was .40.

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[8] McCanne, Roy. "Approaches to First Grade English Reading Instruction for Children from Spanish-speaking Homes." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 670-75.

Conclusions of particular interest to this report are as follows:

1. The experimental approach that developed the highest achievement in reading skills was the basal reader approach. This approach with Spanish-speaking first grade children is recommended when the child is found to be ready to begin formal reading instruction.

2. At the first grade level it appears that the TESL and LEA methods were shown to have particular strengths in oral vocabulary and writing fluency respectively; thus they may be recommended as supplementary approaches for the development of language skills other than reading with Spanish-speaking first graders.

3. The relatively high negative correlation between reading achievement and median income of families and unrelated adults in the community deserves further consideration.

4. The pretest and environmental variables that were identified as valid covariates in comparison with the many variables that were not so identified, indicate a number of factors that need to be examined by schools seeking to improve reading achievement by Spanish-speaking children.

The study directed by Kendrick[9] in San Diego County, California, compared the effectiveness of the Experience Approach to the teaching of the language arts with the Traditional Method of instruction. In this investigation, four areas of the language arts—reading, writing, listening, and speaking—were separately measured. In addition, an index of development in reading interest was taken and pupil attitude toward reading was determined.

The San Diego County Teacher Inventory of Approaches to the Teaching of Reading was administered to determine which teachers were presently using the Experience Approach and which were using the Traditional Method. After each teacher's method had been verified, a table of random numbers was used to select 27 teachers for each of the two treatment groups. The pupil population of the study was derived from 41 elementary schools of 17 school districts in various parts of San Diego County. These districts ranged in enrollment from 169 to 13,500 students. Diverse geographic conditions and socio-economic levels were represented. The population at the end of the experimental period was 337 boys and 308 girls in the Experience Approach group and 355 boys and 302 girls in the Traditional Method group.

Details on the instructional procedures and methods of controlling instruction may be found in the full report.

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[9] Kendrick, W. M. "A Comparative Study of Two First Grade Language Arts Programs." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 25-30.

The following pretests were administered:

Pintner-Cunningham Primary Intelligence Test

Metropolitan Reading Readiness Test

Murphy-Durrell Diagnostic Reading Readiness Test

Thurstone Pattern Copying and Identical Forms Test

Detroit Word Recognition Test

In addition, a measure of Listening was administered to all students prior to and at the conclusion of the experimental period and a 2-minute sample of children's conversation was recorded in October and again in May. Monthly samples of each pupil's written expression were collected for analysis throughout the experimental period and a common unfinished sentence or story topic was used by both treatment groups to stimulate writing. Teachers also observed and recorded the names of those pupils who elected to spend their 15-minute activity period each week in reading. A measure of socio-economic class was incorporated to determine the possible effects of this variable on the comparisons. The following individual tests were administered to a random sample of students in each treatment group at the conclusion of the experimental period:

Gilmore Oral Reading Test

Gates Word Pronunciation Test

Fry List of Phonetically Regular Words—Oral Reading Test

Karlsen Oral Reading Test

Data were analyzed by multivariate approach to analysis of covariance. Since the two groups being compared differed significantly on all six of the control variables, the statistical removal of these differences in the analysis of covariance was an important aspect of the statistical treatment.

Of the comparisons made which resulted in significant differences, ten favored the Traditional Method group and five the Experience Approach group. Those favoring the Traditional Method group were as follows:

Stanford Paragraph Meaning—lower class males

Stanford Paragraph Meaning—middle class males

Stanford Paragraph Meaning—upper class males

Stanford Paragraph Meaning—middle class females

Listening—lower class females

Speaking—Number of Different Words

Speaking—Total Number of Words

Speaking—Mean Sentence Length

Speaking—Mean Sentence Length (five longest sentences)

Speaking—Sentence Complexity

Comparisons favoring the Experience Approach group were:

Interest in Reading—lower class males

Stanford Arithmetic—upper class females

Writing—Total Number of Words, males

Writing—Total Number of Words, females

Speaking—Ratio (Number of Different Words to Total Number of Words)

These conclusions found at the end of the 140-day experimental period of the first grade study contributed to the decision to continue on a longitudinal basis the comparison of these two language arts instructional methods during the second grade. This investigation is the subject of the present report.

CHAPTER III

PROCEDURES

TREATMENT DIFFERENTIATION

The purpose of this research study was to determine the relative effectiveness of two approaches to the teaching of language arts at the second grade level. A description of the two treatments follows.

Experience Approach

The Experience Approach involves the integrated teaching of the skills of listening, speaking, writing, and reading. In this approach the language arts are taught as one program so that the development of skills in one area is related to and reinforces the development of skills in other language arts areas. The language and thinking of the individual child constitute the basis for all skill development. The following criteria and rationale statements serve as guidelines for the Experience Approach.

CRITERIA [10]	RATIONALE
1. The teacher creates situations in which each child feels encouraged to produce something of his own thinking and interest using familiar media such as crayon, pencil, and paint.	1. All learning must be based upon the previous experience of the learner. In expressing what he knows, the child should use familiar media of expression. Those which are normally used in the home and the kindergarten should be continued into the first grade and beyond.
2. The teacher gives each child an opportunity to express his thinking through oral language. The child responds as an individual, as a member of a small group, or in the total class group.	2. Oral language is a base from which written language emerges. Until the child is able to express his ideas through speech, he is less able to communicate effectively with others and has a limited basis upon which to build a writing-reading vocabulary.

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[10] San Diego County, Superintendent of Schools. "Description of Three Approaches to the Teaching of Reading." *Improving Reading Instruction*, Monograph No. 2. May 1961, pp. 20-25.

CRITERIA	RATIONALE
3. In the primary grades, the teacher extracts from the oral expression of the individual a sentence or two which summarizes his story. The teacher records the child's story in summary form for the child and in his presence, using as much of the child's language (his particular mode of expression) as possible.	3. A fundamental concept which the child must hold about "what reading is" is that it is speech written down. As the child sees his own speech taking the form of writing, he is developing readiness for both writing and reading. By using the child's expressed thoughts, meaningful content related to his background of experience is provided. He is thus able to identify more closely with the written material.
4. When using small groups, the teacher records the story in the presence of the children, having them arranged so that they can observe the writing.	4. The informal grouping around the teacher as he writes the dictation of one child after another gives all children a feeling of participation in the total experience of the group.
5. As the teacher writes he takes opportunity to call attention to letter formation, relationship of beginning sounds to the symbols used, repetition of sound and symbol in many situations, capitalization and punctuation, and sentence sense.	5. The natural way for a child to understand "what reading really is" is to observe the recording of his own speech with the letters of the alphabet. Teaching language skills with reference to an actual meaningful task is an effective procedure.
6. The teacher and children carry on informal discussions which relate to the problem of helping them understand that what they say is being symbolized with the letters of the alphabet.	6. When the child has insight into and understanding of the reasons and procedures underlying a written language system, his ability to make use of the system is enhanced. He understands that what he has represented in painting and drawing and said orally can be symbolized in conventional written form and read.

CRITERIA	RATIONALE
7. The teacher binds the productions of small groups into books that can be used in follow-up activities in the classroom. The teacher may have the same group involved in such activities as recalling what was recorded on a previous day, recognizing letters and words, matching words that are alike, suggesting a new story, etc. One group of children might read pupil-produced books developed by other groups.	7. Interest in learning to write and read is stimulated by the use of materials produced within the classroom. Reading books authored by pupils in a class motivates the child to try to achieve competence in reading beyond normal expectations. As the teacher and children work with reading material which has been produced in the classroom, there is increased interest in analyzing the skills involved in producing a book. The appreciation and skills derived from these activities help children to move with enthusiasm into the reading of commercially prepared reading materials.
8. As soon as the teacher is aware that a few children can copy simple words, he helps them to write what they call their own stories. These are usually such stories as might accompany a self-portrait, recording a recent experience, planning individual or group activities.	8. Children who are helped to move into writing on their own at an early age are developing a balance in communication skills which is desirable for better understanding of our language and its use in daily life. Simple beginnings in writing in the early part of the first grade are challenging and interesting to children. A basic objective of language instruction is to help the child recognize and capitalize upon the natural interrelatedness of writing, reading, speaking, and listening.

CRITERIA	RATIONALE
9. A variety of independent activities (using crayon, pencil, paint, etc.) is open to the child during the time in which he is not directly involved in individual or small group sessions with the teacher. These pupil products may serve as the bases for total class experiences in language. The child's interpretation of his independent work is recorded by the teacher or the child himself for the whole class to see. In this way, provision is made for an additional experience from which the class is able to see how thoughts are recorded in writing. Instruction in skills appropriate to the task at hand, plus further discussion of the purposes of writing, can be carried on in this type of situation.	9. Most children seek activities such as painting, crayon sketching, dramatizing, etc., because they have experienced some previous success in using these media. Young children are able to express their ideas more freely through such activities as these than through writing alone since these activities place fewer restrictions on ideas and vocabulary. The individual child sees a clearer purpose for his independent work when his own product is used for instructional purposes. Children who have mastered the basic skills of writing in conjunction with reading will continue to find it helpful to use a variety of media in communicating.
10. The teacher and children develop a simple routine for guiding and utilizing children's independent activity productions. This routine might include (a) procedures for selecting and distributing materials, (b) procedures for displaying or storing products, (c) procedures for presenting the material and sharing experiences.	10. The establishment of simple routine procedures allows the teacher and children to plan activities over an extended period of time. Thus language activities that are held on different days are more clearly seen as interrelated; e.g., writing to reading, speaking to writing, etc. The routines necessary for this type of organization give the children the security that comes from knowing what comes next.
11. The teacher utilizes the activities and procedures which provide the background and motivation that enable the individual child to make a self-commitment to write on his own. The teacher is constantly alert to the emergence of such a development in each child.	11. There is a period of maturation when the child is physically, socially, and mentally ready to write. This stage of development is unique to each child. One of the best evidences of readiness for writing is the child's own indication of his desire to write.

CRITERIA	RATIONALE
12. After the child makes the self-commitment, the emphasis in the teacher's role changes from one of motivating the child to one of facilitating his development in the communication skills. The teacher encourages the child to express his experience in appropriate forms of communication. Assistance is given the child in planning his independent effort and in the specific skills required for it.	12. One of the major goals of language instruction is to help all children to become more and more independent in their ability to communicate. This independence develops over a period of time, necessitating varying degrees of teacher guidance depending upon the child's level of development.
13. The teacher may invite other children to react to a child's independent production (a painting, a model, an idea for a play) and to indicate what they would write about it.	13. Children learn from other children and develop a feeling of cooperation as they interact through sharing their own communication efforts. The children begin to sense the great variety of ideas possible in interpreting a production and gain some experience in making discriminative responses. The elements of creative thinking as well as critical thinking are utilized.
14. Children learn how to utilize a wider selection of communication materials as the environment of the classroom is enriched with their own productions and with other resources which they and the teacher bring. The teacher is working toward a goal of independence in each child, thinking through what is to be done, the difficulties to be anticipated, and the resources available to help the child solve his problems.	14. Children learn to evaluate and select appropriate materials when a wide choice is available. Abundant resources help motivate the child to pursue an interest further or to develop a new interest; they also help him develop proficiency in using communication skills.

CRITERIA	RATIONALE
15. As children continue to write independently, the teacher meets with them in small groups and works with them on vocabulary development. Children are provided with word lists which contain basic vocabulary words for their level as well as lists of general interest. The teacher encourages children to use these additional words in many ways. This enables children to increase their vocabulary with a minimum of direct teaching.	15. As children gain some confidence in reading and writing their own ideas, they need systematic help in expanding their vocabulary in reading by including in it those words they are most frequently using in their own language experiences.
16. As the child develops a firm grasp of a reasonably large sight vocabulary, including a good number of the basic words for his level, the teacher provides new printed materials for him to read. Opportunity is provided for the child to read orally when it is appropriate for him to do so. The teacher records the words with which the child has difficulty and provides experiences which enable the child to add them to his vocabulary.	16. Meaning of, facility in using, and recognition of printed words are enhanced when unfamiliar words are learned in contexts which are meaningful to the child. Success in first endeavors tends to sustain the child's interest in the task and inspires him to further effort.
17. As children have successful reading experiences they are provided more and more "book reading" opportunities. The child's interests, needs, and abilities are the prime factors considered as the teacher assists the child to move to higher levels of independence in reading. The child is encouraged to read for a variety of purposes.	17. The child needs the sense of achievement which comes as a result of increased independence in reading. He can recognize the pattern of his progress and realistically adjust his aspiration level at any given point. As the child branches out into many types and kinds of reading experiences, he begins to recognize his potential for greater independence in reading and the communication arts in general.

Using the preceding criteria and rationale statements as guidelines, specific teaching procedures were developed.

The Experience Approach used the language and thinking of individual children as the basis for skill development. Beginning with the first day of school each child was encouraged to share his ideas with others through the use of words and pictures. With repeated opportunities for sharing ideas, illustrating stories, and writing stories, children developed writing vocabularies and were able to write their own stories independently. Devices such as picture-word charts, word cards, and room labels were provided to help children extend their writing vocabularies.

The motivation and building of experiences upon which the children and teacher based the language experiences of listening, verbalizing, and writing were derived from library books, basic texts, stories and poems read by the teacher or a child, open-ended sentences, films, filmstrips, study trips, class or small group discussions, art prints, and children's paintings. Children in the Experience Approach group were encouraged to use their personal experiences for language development, with content of the stories usually drawn from literature, science, and social studies.

Teachers in the Experience Approach group utilized the daily block of 120 minutes of language arts time in the following way:

> Approximately 35 percent in writing activities, with emphasis on activities designed to motivate and stimulate ideas, illustrate pictures, dictate stories, and write individual stories;
>
> Approximately 35 percent in reading activities, which included the reading of student stories, library books, and stories from the State-adopted textbooks;
>
> Approximately 30 percent in direct skill instruction. The teacher taught skills to individual students as well as to small groups commonly referred to as "seminars." Each teacher utilized individual and group stories to determine skills to be taught, which included letter names and letter formation, word attack skills, capitalization, spelling, punctuation, etc. Emphasis in seminars was given to refining skills of speaking and listening.

Traditional Method

The Traditional Method tends to be structured around the materials of instruction which are supplied to the classroom teacher. The State-mandated program in California is representative of traditional methods. The California State Board of Education has adopted textbooks in the language arts for the classrooms of the State. Basal reading textbooks are introduced in the first grade.

A co-basal series is provided with readiness books, pre-primers, primers, and a graded series of readers. Three supplemental series of enrichment textbooks are provided at second grade level. Graded text materials in spelling and handwriting have been adopted for the primary grades.

In the Traditional Method, which generally follows the sequence and division of topics dictated by the adopted materials, reading instruction is usually separate from instruction in the other language arts areas and is introduced before writing. Provision for the development of listening and speaking skills is included in basal and enrichment textbooks. These skills are maintained in the library and sharing activities.

The following criteria and rationale statements serve as guidelines for the Traditional Method.

CRITERIA[11]	RATIONALE
1. The teacher attempts to assess the reading ability of each student for the purpose of establishing reading groups. He uses results of standardized reading tests, observation of pupils, intelligence tests, information from other teachers, previous books read, and consideration of class size and make-up.	1. Information concerning the child's reading ability, intelligence, interest, attitudes, and previous learning experiences needs to be analyzed if he is to be placed in the best possible reading instructional situation. Children with similar reading abilities can be taught more effectively in groups than can groups of children with wide differences in reading ability.
2. On the basis of available student information, the teacher assigns each child to a reading group. Groups are formed on the basis of reading ability with some flexibility for placing children in groups on other bases. Children may be moved from one group to another when they have need for a new group experience. In the typical class of 25 to 30 children, three groups are considered adequate.	2. Children of similar abilities placed in small groups can be more easily instructed in reading skills. Materials of instruction can be prepared in terms of group needs on the basis of group ability. Children progress at different rates, which necessitates flexibility in assigning a child to different groups when his reading development indicates need for change.

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[11] *Ibid.*, pp. 10-13.

CRITERIA	RATIONALE
3. At reading instruction time the teacher works with each group separately (usually in a reading circle situation). The teacher follows the suggestions for sequence, content, etc., set forth in the manual which accompanies the basic and supplementary series. While the teacher works with one group, the other children work at seatwork assignments or in self-selection activities such as art, word games, etc.	3. Since the needs of the group differ and since there are more opportunities for individual help in a small group, the teacher works most effectively through direct instruction activities geared to the ability of each group. In the small groups it is possible for each child to read orally, take part in discussion, tell a story, participate in skill building activities, etc. Children learn to work independently as they have opportunity for independent work (seatwork) while the teacher is working directly with one of the groups in a reading circle. (The teacher's manuals offer directions for carrying out a systematic reading program which accommodates several levels of ability.) Seatwork assignments which are correlated to the basic reader stories are included in the manual. Assignments for creative activities are also included.

CRITERIA	RATIONALE
4. Generally, the plan of instruction for individual groups entails a definite procedure which includes these steps (procedure varies in different series and at different grade levels): • Setting purpose (motivation, background information, etc.). • Introducing new vocabulary and teaching necessary skills. • Silent reading by pupils. • Oral reading by pupils. • Discussing story read. • Independent activities (workbooks, seatwork, teacher-guided skill development, supplementary silent reading).	4. Certain logical procedures have proved successful in the teaching of reading printed symbols. Children learn best when they are motivated. To enhance accurate reading and provide for success, skills related to the lesson and new words taken from the lesson may become part of the daily reading activity. Silent reading provides for the fortification of skills. Oral reading provides the child with an opportunity to communicate with others. The teacher is able to evaluate the child's reading progress during oral reading. Follow-up activities provide for additional opportunities to use skills and vocabulary previously introduced as well as to pursue interests related to the content of stories read. Follow-up activities can be used to evaluate student progress.
5. The teacher attempts to establish the purposes of reading in a given lesson. He generally follows the suggestions of the manual. Interests of the group in a particular topic may be used when related to the lesson story to be read.	5. Children's interest in and understanding of the purpose of a task improve the learning situation. The suggestions offered in the teacher's manual take into account what is known about children's interests and ways in which children may be stimulated.

CRITERIA	RATIONALE
6. New words are introduced to the children before they encounter them in a story context. These new words are part of a carefully controlled vocabulary around which the entire series is built. Word attack skills which are needed in solving these new words are taught. Other skills to be emphasized are suggested in the manual. (In primary grades much emphasis is given to developing a basic sight vocabulary.) Instruction is aimed at developing meanings for new words being introduced for a given lesson. New words follow a sequence which is based upon criteria of relative difficulty, interest as to age, level, etc.	6. Children have more success with printed symbols when they are prepared to cope with specific problems they will encounter when reading the new story in the basic text. When the vocabulary is controlled in this manner, only a few new words are introduced in each lesson. In addition, words which have been previously introduced are repeated in succeeding stories. This technique enables the child to handle a small number of new words and to maintain a growing number of previously learned words from a basic vocabulary list.
7. After discussion of new words and points developed in the story, children are generally required to read the story silently, keeping in mind the purposes that the teacher established with the group. (This procedure varies with grade level and may range from short sentences to complete stories.)	7. Questions are used to focus on the main points of the story and to guide reading for certain purposes. By then reading the story silently, children are better able to understand the content of the story.
8. Children in each group are given many opportunities to read orally. Oral reading is generally done in the group itself by individuals while the others serve as a small audience. Children in the group discuss and react to elements of the story and the presentation of the individual reader. The teacher may provide individual instruction in specific skills as he reacts to the oral reading.	8. When children read orally, the teacher gains an opportunity to evaluate such reading abilities as pronunciation, phrasing, word attack skills, expression, speed, and fluency. The teacher is enabled to appraise listening skills of group members. Oral group reading also serves as a means of sharing.

CRITERIA	RATIONALE
9. Prior to and following directed reading lessons, pupils are expected to engage in a variety of planned independent activities. Many of these activities are related to the lesson, such as workbook exercises which accompany the basic text, use of teacher prepared worksheets, and related recreational reading. Activities not directly related to the lesson itself are provided for by the teacher. These include reading in various content fields, recreational reading, expressive activities (group dramatization, creative writing), and practice activities.	9. It is necessary that children not under the direct supervision of the teacher be provided with a variety of well-planned independent activities to reinforce and extend reading skills.

Using the preceding criteria and rationale statements as guidelines, specific teaching procedures were developed. The Traditional Method group adhered very closely to the teacher's manual for each reader in the Ginn Series as a guide to instructional procedures.

At the beginning of the school year, children were grouped according to their reading level. A few of the children needed to work at the pre-primer chart story level. Others were placed at the primer level and at the first grade level. Some children were ready to use second grade materials. When the groups indicated readiness to move into more difficult material, they were placed at the next higher level. Accelerated students moved beyond grade level limitations. Additional materials of other basal series could be used if needed to reteach or maintain skills, increase fluency, develop comprehension, or enhance reading enjoyment. School and public library facilities were available to all the children.

The Ginn Enrichment Series, the Prose and Poetry Series, and the Wonder Story Books were used in the literature program. In addition, a great variety of trade books and collections of prose and poetry were available to all classrooms.

One-hundred-twenty minutes of language arts instruction were provided daily. Ninety minutes of this time were devoted to direct instruction in reading and listening and were divided into two periods: (1) a fifty-minute period in which all three groups met with the teacher; and (2) a forty-minute period in which the low group met with the teacher together with either the high or the average group, depending upon their needs. Once a week the forty minutes were devoted to library materials, and the entire ninety minutes every other week were used for library or enrichment reading. Twenty minutes of the 120-minute period each day were allocated to the area of handwriting and spelling utilizing teacher's manuals provided by the State of California. The remaining ten-minute period was allocated to the direct teaching of oral and written expression. This was further expanded through the use of the Ginn Reading Manuals.

Instructional Materials

The following instructional materials were used by participating teachers:

Control Group (Traditional Method)

Ginn Basic Readers

- Fun With Tom and Betty
- My Little Red Storybook
- My Little Green Storybook
- My Little Blue Storybook
- Little White House
- On Cherry Street
- We Are Neighbors (2nd Reader - Level I)
- Around the Corner (2nd Reader - Level II)

Ginn Basic Readers - Enrichment Series

- Come With Us
- Under the Apple Tree
- Ranches and Rainbows (2nd Reader)

Sheldon Basic Reading Series

- Picture Stories (Readiness)
- At Home (Pre-primer - Level I)
- Here and Near (Pre-primer - Level II)
- Our School (Primer)
- Our Town (1st Reader)
- Fields and Fences (Readiness 2nd Reader)

Prose and Poetry Series

- Story Wagon
- Story Time
- Story Train (2nd Reader)

Wonder Story Books

It Happened One Day (2nd Reader)

Success in Spelling

Manuscript Writing Made Easy

Experimental Group (Experience Approach)

(Instructional procedures and materials for the Experience Approach group were controlled by guidelines developed by the project staff.)

Films

Let's Write a Story
Churchill Films
Los Angeles, California

Sample Units

Allen, R. Van. At Home and School. Department of Education, San Diego County. 1962.

——Beginning Writing Experiences. 1962.

——Exploring Wildlife Around Us. 1961.

——Language-Experience Approach to Reading. 1959.

Self-Selective Reading. Department of Education, San Diego County. 1966.

Time Schedule

The following time schedule was adhered to as closely as possible.

Traditional Method

First Semester				Second Semester
First Six Weeks	Minutes	Twelve Weeks	Minutes	Minutes
Directed Reading	100	Directed Reading	90	→
Literature		Literature	(50-40)	
Oral Expression		Oral Expression		
Handwriting	20	Handwriting	30	→
Written Expression		Written Expression		
Spelling		Spelling		
		A forty-minute period was devoted each week to literature. The ninety-minute period was given biweekly to literature.		
Total Time	120	Total Time	120	→

Experience Approach
(Both Semesters)

All Language Arts Integrated	Total Time	120 Minutes

POPULATION

Teacher Selection

The 57 teachers participating in the study were selected by the building principals with the assistance of members of the San Diego County Department of Education staff who were working with the project. A conference was held with the building principals to determine the appropriate room assignment for children completing the first year of the project. Continuity with the previous year's program and consistency as to the method actually being employed in the classroom were the two major determinants in the selection of project teachers.

All teachers in the treatment group were female. With respect to age, more teachers in the Traditional Method group were in the over-50-year-old category than were in that category in the Experience Approach group. The number of teachers in the under-30-year-old category was somewhat greater in the Experience Approach group.

With respect to the highest earned degree held, six teachers in the Traditional Method group held the M.A. degree, and no teachers in the Experience Approach group held this degree. Only one teacher participating in the project had not earned at least an A.B. degree, this teacher being in the Traditional Method group. All teachers in the project were serving under a standard teaching credential.

In number of years of teaching experience, more teachers in the Experience Approach group had fewer than 10 years of experience; while among the Traditional Method teachers, a higher proportion had more than 20 years of experience. About half of the Traditional Method teachers had less than five years of second grade teaching experience, and more than half of the Experience Approach teachers had less than five years of second grade teaching experience.

Although there were a few more unmarried teachers among the Traditional Method group, a comparable majority in each of the treatment groups were married. About half of the teachers in each of the treatment groups had from one to three children. Somewhat less than half had no children.

The characteristics of these teachers are shown in Figure I.

Pupil Population

The pupil population of the study came from 35 elementary schools in 17 school districts located in various parts of San Diego County. These districts ranged in enrollment from 157 students to 13,206 students. Diverse geographic conditions and socio-economic levels were represented.

The student population at the beginning of second grade included 355 boys and 339 girls in the Experience Approach group and 406 boys and 380 girls in the Traditional Method group. By the end of the experimental period, the student population had decreased to 313 boys and 297 girls in the Experience Approach group and 356 boys and 338 girls in the Traditional Method group.

The length of the school year ranged from 176 to 180 days for most of the schools. Average size of participating classes was 30 for the Traditional Method group and 31 for the Experience Approach group. Length of the school day was longer in the Experience Approach schools.

Characteristics of the participating schools may be examined in Figure II.

FIGURE I

TEACHER CHARACTERISTICS

<table>
<tr><td>Characteristics</td><td colspan="12">Traditional Method</td><td colspan="12">Experience Approach</td></tr>
<tr><td>Sex</td><td colspan="6">Male = 0</td><td colspan="6">Female = 29</td><td colspan="6">Male = 0</td><td colspan="6">Female = 28</td></tr>
<tr><td>Age</td><td colspan="4">Under 30 yrs.
7</td><td colspan="4">30-50 yrs.
12</td><td colspan="4">Over 50 yrs.
10</td><td colspan="4">Under 30 yrs.
11</td><td colspan="4">30-50 yrs.
11</td><td colspan="4">Over 50 yrs.
6</td></tr>
<tr><td>Highest Earned Degree</td><td colspan="4">With No Degree
1</td><td colspan="4">With B.A.
22</td><td colspan="4">With M.A.
6</td><td colspan="4">With No Degree
0</td><td colspan="4">With B.A.
28</td><td colspan="4">With M.A.
0</td></tr>
<tr><td>Type of Certificate Held</td><td colspan="6">With Provisional
0</td><td colspan="6">With Standard
29</td><td colspan="6">With Provisional
0</td><td colspan="6">With Standard
28</td></tr>
<tr><td>Years of Teaching Experience</td><td colspan="4">Under 10
12</td><td colspan="4">10-20
7</td><td colspan="4">Over 20
10</td><td colspan="4">Under 10
18</td><td colspan="4">10-20
8</td><td colspan="4">Over 20
2</td></tr>
<tr><td>Years of 2nd Grade Experience</td><td colspan="4">Under 5
14</td><td colspan="4">5-15
11</td><td colspan="4">15-30
4</td><td colspan="4">Under 5
20</td><td colspan="4">5-15
6</td><td colspan="4">15-30
2</td></tr>
<tr><td>Marital Status</td><td colspan="4">Single
7</td><td colspan="4">Married
20</td><td colspan="4">Widow or Div.
2</td><td colspan="4">Single
2</td><td colspan="4">Married
24</td><td colspan="4">Widow or Div.
2</td></tr>
<tr><td>Number of Children in Teacher's Family</td><td colspan="3">None
14</td><td colspan="3">1-3
15</td><td colspan="3">4-6
0</td><td colspan="3">Over 6
0</td><td colspan="3">None
11</td><td colspan="3">1-3
16</td><td colspan="3">4-6
1</td><td colspan="3">Over 6
0</td></tr>
</table>

FIGURE II

CHARACTERISTICS OF PARTICIPATING SCHOOLS

Characteristics	Traditional Method						Experience Approach					
Size of Participating Elementary Schools (Pupil Population)	Under 200		200-400		Over 400		Under 200		200-400		Over 400	
Number of Schools *	1		0		19		1		1		14	
Average Size of Participating Classes	30						31					
Length of School Day (Hours)	3.0-3.5	3.6-4.0	4.1-4.5	4.6-5.0	5.1-5.5	5.6-6.5	3.0-3.5	3.6-4.0	4.1-4.5	4.6-5.0	5.1-5.5	5.6-6.5
Number of Schools	0	13	7	0	0	0	3	9	4	0	0	0
Length of School Year (Days)	175-180			Over 180			175-180			Over 180		
Number of Schools	20			0			15			1		

*One school, in the over-400 classification, serves both treatment groups.

Community Characteristics

Descriptive information was sought on characteristics of the communities in which project classrooms were located. In regard to median years of education of adults, the number having a high school education was greater for the Experience Approach group. With respect to median family income, the two groups were essentially comparable.

Of the 29 classrooms in which the Traditional Method was used, 28 were in communities of more than 10,001 population; 1 was in the 5,001 to 10,000 population range. Classrooms in which the Experience Approach was used included 2 in communities with under 2,500 population, 2 in the 2,501 to 5,000 range, 6 in the 5,001 to 10,000 range, and 18 exceeding 10,001.

A measure of socio-economic class was incorporated to assess the possible effects of this variable on the comparisons. This was done by collecting information about the father of each pupil in the study. The measure employed was a modification of a scale developed by Centers.[12] This scale assesses three dimensions of socio-economic class—occupation, power, and economic status. The three dimensions have been combined to produce one value describing socio-economic class. The method of arriving at a single value is shown in Appendix B. In order to determine the possible effects of socio-economic class, the scale was originally divided into high, middle, and low categories. A two-part distribution was created for the second grade analysis by separating the low socio-economic group from the middle and upper socio-economic levels. Single scale values in the range 00-05 were categorized as low; values in the range of 06-11 were categorized as middle; values in the range 12-24 were categorized as upper. This distribution placed approximately 25 percent of the population in the low socio-economic classification.

The Pintner-Cunningham Primary Test of Intelligence (1964 revision) was administered to all pupils in the experiment by the classroom teachers at the end of September 1965 for use as a control.

IN-SERVICE EDUCATION

Teachers who participated in the study attended in-service meetings prior to and during the progress of the experiment. Activities for each treatment group were organized and conducted by an assigned curriculum coordinator from the Department of Education, San Diego County, and by outside consultants. Two meetings were held prior to the experimental period. The first meeting acquainted teachers with the general design of the project and provided instruction in procedures to be used in administering pretest instruments. The second involved outside consultants. Dr. R. Van Allen, Professor of Education, University of Arizona, worked with the Experience Approach group; Dr. Paul Anderson, Professor of Education, San Diego State College, conducted activities for the Traditional Method group. In-service sessions were designed to assure that participating teachers would teach effectively in the method prescribed for them. After the experimental period began, teachers met monthly to participate in a continuing in-service program. Both treatment groups attended an equal number of meetings and were given an equal amount of consultant time and help from the curriculum coordinator. During the experimental period, coordinators visited the classrooms of teachers in their treatment groups on a regularly scheduled basis to help teachers stay within the design of the study.

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[12] Centers, Richard. The Psychology of Social Classes: A Study of Class Consciousness. Russell and Russell, 1961, p. 51. (Originally published by Princeton University Press, 1949.)

INSTRUMENTATION

The following pretest instruments were administered between September 27 and October 5, 1965:

Pintner-Cunningham Primary Intelligence Test

Stanford Achievement Test, Primary I Battery, Form W

In addition to these, the following locally developed measures were employed:

A measure of Listening which was administered to all students in the study prior to and at the conclusion of the experimental period.

A two-minute sample of children's conversation (child to adult) which was recorded in October and again in May.

Monthly samples of each pupil's written expression which were collected throughout the experimental period. A common story topic was used by both treatment groups to stimulate writing.

At the conclusion of the 140-day experimental period in May 1966, the following tests were administered:

Stanford Achievement Test, Primary II Battery, Form W

San Diego County Inventory of Reading Attitude

A Writing sample consisting of a "restricted stimulus measure."

A measure of Interest in Reading based on a teacher rating of students on the following dimensions: Number of Books Read Completely; Number of Books Read Partially; Eagerness to Read; and Maturity of Choices.

The following individual tests were administered to a random sample of students in each treatment group at the conclusion of the experimental period:

Gilmore Oral Reading Test

Gates Word Pronunciation Test

Phonetically Regular Words Oral Reading Test

Group tests were administered by the classroom teacher, individual tests by the research staff. Prior to administering tests, each teacher attended in-service sessions which centered attention on procedures to be followed. All tests were scored by trained third parties and then rechecked for accuracy.

CHAPTER IV

ANALYSIS OF DATA

This research sought to determine whether the relative effectiveness of two approaches to instruction in the language arts would be sustained through a second year. Analysis of data would also indicate the relative effectiveness of the two approaches when applied to the second grade only.

In order to analyze the differential effects of the two language arts pedagogies as applied to children with various characteristics related to learning potential, a computer program able to accommodate a large volume of data was required. The program selected was drawn from the Library of Health Sciences Computing Facility, School of Medicine, University of California at Los Angeles. The program, BMD04V,[13] was used for the analysis of covariance computations. It is eminently suited to situations involving two or more groups, with one dependent variable and one or more variables to be held constant.

The subjects of the study were blocked according to sex, length of time in the study, i.e., longitudinal or second grade only, and for socio-economic class. The relative effect of the two approaches on each of the dependent variables was then analyzed for each of the eight subgroups derived.

Although the blocking procedure resulted in groups comparable with regard to sex, length of time in the study, and socio-economic level, it was not deemed feasible to select groups exactly comparable in chronological age and intelligence. The effect of initial differences between groups on these latter two variables was controlled by utilizing the analysis of covariance for all group comparisons. This technique represents an extension of analysis of variance to allow for the correlation between dependent variables and other variables whose effect is to be eliminated.

It will be seen that grouping procedures have severely restricted the number of subjects available for some of the comparisons, a fact to be kept carefully in mind when considering some of the differences observed. The comparisons resulting in statistically significant differences between Experience Approach and Traditional Method are shown in Figure III for the continuing subjects and in Figure IV for the new subjects. The detailed statistical reports for all comparisons are contained in the eight tables found in Chapter V.

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[13] University of California at Los Angeles, Department of Preventive Medicine and Public Health, School of Medicine, Health Sciences Computing Facility. Biomedical Computer Programs. Edited by W. J. Dixon. January 1, 1964, revised September 1, 1965, BMD04V, pp. 525-42.

FIGURE III

SIGNIFICANT EXPERIMENTAL DIFFERENCES— CONTINUING SUBJECTS

Variables	Comparisons	Significance Level				Favoring
		Boys		Girls		
		LSE	HSE	LSE	HSE	
SPEAKING	Number of Different Words	.01	.01			EA
	Total Number of Words	.05	.01	.05	.01	EA
	Ratio, Number of Different Words-Total Number of Words				.01	TM
	Mean Sentence Length					
	Mean Sentence Length (five longest)					
	Sentence Complexity					
STANFORD ACHIEVE-MENT TEST	Word Meaning				.01	TM
	Paragraph Meaning		.01		.01	TM
	Science-Social Studies	.01		.01		EA
	Spelling					
	Word Study					
	Language					
	Arithmetic Computation				.01	TM
	Arithmetic Concepts			.05		EA
LISTENING						
WRITING	Number of Different Words	.05				TM
	Total Number of Words	.05				TM
	Mean Sentence Length				.05	TM
	Sentence Complexity					
	Spelling					
RESTRICTED STIMULUS MEASURE	Running Words			.01		EA
	Different Words			.05		EA
	Words Spelled Correctly			.01		EA
	Polysyllabic Words					
	Mechanics Ratio		.05			TM
READING	San Diego Pupil Attitude Inventory				.05	TM
	Books Read Completely					
	Books Read Partially				.05	TM
	Eagerness to Read					
	Maturity of Reading Choices					
GILMORE	Accuracy					
	Rate					
FRY						
GATES						

FIGURE IV

SIGNIFICANT EXPERIMENTAL DIFFERENCES—NEW SUBJECTS

Variables	Comparisons	Significance Level				Favoring
		Boys		Girls		
		LSE	HSE	LSE	HSE	
SPEAKING	Number of Different Words					
	Total Number of Words		.01		.01	EA
	Ratio, Number of Different Words-Total Number of Words		.01		.01	TM
	Mean Sentence Length				.05	EA
	Mean Sentence Length (five longest)					
	Sentence Complexity		.05			EA
STANFORD ACHIEVEMENT TEST	Word Meaning					
	Paragraph Meaning		.01			TM
	Science-Social Studies	.05		.05		EA
	Spelling					
	Word Study					
	Language					
	Arithmetic Computation					
	Arithmetic Concepts	.05				EA
LISTENING					.05	TM
WRITING	Number of Different Words	.05				TM
	Total Number of Words	.05				TM
	Mean Sentence Length					
	Sentence Complexity					
	Spelling	.05				EA
RESTRICTED STIMULUS MEASURE	Running Words					
	Different Words	.05				EA
	Words Spelled Correctly					
	Polysyllabic Words					
	Mechanics Ratio					
READING	San Diego Pupil Attitude Inventory	.05	.05		.05	TM
	Books Read Completely				.05	TM
	Books Read Partially			.05		TM
	Eagerness to Read	.05				TM
	Maturity of Reading Choices					
GILMORE	Accuracy				.05	EA
	Rate					
FRY		.05				TM
GATES						

CHAPTER V

SUMMARY AND CONCLUSIONS

SUMMARY

Data on two distinct populations were analyzed in the present study. The principal population consisted of those subjects who had participated in the first grade study and who remained in their respective treatment groups until the conclusion of the second year. These children constitute the longitudinal aspect of the study and their data served to confirm or deny the hypothesis that an additional year of study would produce differences not revealed at the end of one year. The secondary population was composed of children who were instructed by some unprescribed methodology during the first grade and who received language arts instruction by either the Experience Approach or Traditional Method during second grade. Subjects in both populations were taught in the same classrooms by the same teachers during the second year of the study.

The number of subjects having test measures for analysis at the close of the second year was 704 continuing and 600 "new" pupils. This total of 1304 subjects is about 12 percent less than the total number of subjects at the beginning of the second grade.

The findings for the longitudinal population will be summarized first. It will be seen that purely on the basis of the number of observed differences obtaining at the close of two years of exposure to the prescribed instructional routines, 23 were significant. Thirteen of the differences between adjusted means were significant at the .01 level of confidence. Of the total number of differences, 12 favored the Experience Approach (EA) group, 11 the Traditional Method (TM). (Note: At the end of the first grade study, 10 out of 15 comparisons resulted in significant differences favoring the Traditional Method group.)

The significant experimental differences for the longitudinal population are shown in Figure III. The differences found for the continuing subjects are related to first grade results in the following discussion. Certain comparisons were unique to the second year, i.e., subtests of the Stanford Primary II Battery, which are not a part of the Primary I Battery—Word Meaning, Science-Social Studies, Language, and a second Arithmetic score. It may be noted that some measures, for example Sentence Length and Sentence Complexity in the Speaking samples and the Listening test, which were differentiating at the end of the first grade, are no longer so after two years of study. Others, for example Stanford Spelling and Word Study, as well as Sentence Length, Complexity, and Spelling in the Writing task, have continued to be non-differentiating. The Language measure of the Stanford test did not discriminate between teaching approaches.

The Gilmore, Fry, and Gates tests have also remained unaffected insofar as significant differences are concerned.

Specific comparisons which resulted in significant differences between the teaching methods studied were as follows: For measures of Speaking, Experience Approach boys in both lower and higher socio-economic classes (LSE, HSE) surpassed those in the Traditional Method group. On the Total Number of Words spoken, the EA group is again favored for boys and girls in both LSE and HSE classes. When the Ratio of the Number of Different Words to the Total Number of Words spoken is considered, TM girls in the HSE class are superior. Each of the differences in this set of comparisons represents a change in direction from the first grade study.

On the Stanford Achievement Test, HSE class girls instructed by the TM were superior on Word Meaning. This measure was not differentiating for the first year. On Paragraph Meaning, the TM approach proved most effective for both boys and girls of the HSE class, which was confirming of the first grade results. In the EA group, both boys and girls of the LSE class were most proficient in Science-Social Studies. On Arithmetic Computation, HSE class girls taught by the TM achieved best. In the first grade study, HSE class girls of the EA were superior. In Understanding Arithmetic Concepts, EA-LSE class girls excelled.

Writing was evaluated in two ways in the present study. The first way continued the first grade approach by measuring attributes of samples collected at intervals during the year. On these measures the Number of Different Words proved differentiating, yielding a difference favoring the TM for LSE class boys. No difference had been revealed in the previous year. The TM-LSE class boys proved superior on Total Number of Words, a measure which had favored the EA during the first year. Mean Sentence Length proved to be a significant comparison for the first time, favoring HSE class girls taught by the TM.

Another sample of Writing was obtained in May 1966 as a part of the nation-wide cooperative research. This "restricted stimulus measure" was derived from the children's completion of a common story each teacher read. Subjects were given 20 minutes to complete the story. On these stories, which had no counterpart in the first grade study, LSE class girls in the EA achieved the highest mean scores for Running Words, Different Words, and Words Spelled Correctly. Neither approach gained superiority on Polysyllabic Words, but HSE class boys of the TM group excelled on the Mechanics Ratio.

The two approaches were differentiated on two measures of Reading Interest. The HSE class girls of the TM earned highest ratings on the San Diego Pupil Attitude Inventory and on the Number of Books Read Partially.

The second grade population, or "new" subjects, participated in the same experiences and evaluative procedures as did the longitudinal subjects. The total number of differences found was 23, of which 13 favored the TM and 10, the EA group. Only five of the comparisons reached the .01 level of confidence. On measures of Speaking, the groups were differentiated on the following: Total Number of Words—boys and girls, HSE class, favoring EA; Ratio, Number of Different Words to Total Number of Words—boys and girls, HSE class, favoring TM; Mean Sentence Length—HSE class girls, favoring EA; and Sentence Complexity—HSE class boys, favoring EA.

On the Stanford Achievement Test, the following items were differentiating: Paragraph Meaning—HSE class boys, favoring TM; Science-Social Studies—LSE class boys and girls, favoring EA; Arithmetic Concepts—LSE class boys, favoring EA.

Listening test results favored the TM-HSE class girls.

On the continuing measures of Writing, the following results were observed: Number of Different Words—LSE class boys, favoring TM; Total Number of Words—LSE class boys, favoring TM; Spelling—LSE class boys, favoring EA. Only one of the "restricted stimulus measures" of Writing proved discriminating: Different Words—LSE class boys, favoring EA.

On the several indices of Reading Interest, the following differences were found, all favoring the TM: San Diego Pupil Attitude Inventory—boys, LSE and HSE classes, and girls, HSE class; Books Read Completely—HSE class girls; Books Read Partially—LSE class girls; Eagerness to Read—LSE class boys.

On the Gilmore test, the measure of Accuracy favored HSE class girls of the EA. The TM-HSE class boys were superior on the Fry test.

It is interesting to note that among the "new" subjects, 14 of the 23 significant differences favored boys, whereas in the longitudinal study, 14 of the 23 comparisons favored girls.

CONCLUSIONS

Data derived from 34 different comparisons grouped by sex and socio-economic class were analyzed. Observations were made separately for "continuing," or longitudinal, subjects and for "new," or second-grade-experience-only, subjects. Twenty-three statistically significant mean differences were found in the longitudinal data. A like number of significant differences appeared on comparisons between Experience Approach and Traditional Method groups with only one year in the program. For the longitudinal population, 12 of the comparisons favored the Experience Approach group, which represented substantial gains for this method over the first year. For the "new" subjects, 13 comparisons favored the Traditional Method. In general, the level of confidence in the results of comparisons on the "new" subjects is lower than it is for the longitudinal population. Many comparisons were made on very small subgroups, thus enhancing the possibility for Beta error.

For the principal population in the study, it may be concluded that the EA was a more effective method for the development of oral expression in boys and girls regardless of socio-economic class. As measured by the Stanford Achievement Test, the TM was particularly effective with HSE class girls on Word Meaning, Paragraph Meaning, and Arithmetic Computation, and on Word Meaning for HSE class boys. However, results on the Science-Social Studies comparisons favored both boys and girls of the LSE class in the EA group. Arithmetic Concepts were also more effectively managed by LSE class girls in the EA group. Three of the five continuing measures of Writing differed in favor of LSE class boys and HSE class girls in the TM group. The EA seemed to enhance performance on the "restricted stimulus measure," particularly for LSE class girls. The TM effected a higher performance on the Mechanics Ratio for HSE class boys. On two Reading indices, the San Diego Pupil Attitude Inventory and Books Read Partially, the TM proved superior for HSE class girls.

For the "new" subjects, three out of four significant differences on measures of Speaking favored the EA group. On one, the Ratio of Number of Different Words spoken to Total Number of Words in the sample, the TM was superior. However, these measures were differentiating only for the HSE class subjects. On the Stanford Achievement Test, the TM favored only boys of the HSE class. The EA differentiated LSE class boys and girls on Science-Social Studies and LSE class boys on Arithmetic Concepts. Performance on the Listening test was better for HSE class girls in the TM group. The only significant differences on Writing measures favored LSE class boys—the TM for Number of Different Words and Total Number of Words and the EA for Spelling and Different Words used in the "restricted stimulus measure." For the "new" subjects, the TM proved the more effective on the various Reading indices. It differentiated all but LSE class girls on the San Diego Pupil Attitude Inventory. The HSE class girls in the TM achieved better on Books Read Completely; LSE class girls excelled on Books Read Partially; and LSE class boys were superior in Eagerness to Read. On the Gilmore test, only the Accuracy Score proved discriminating, favoring HSE class girls in the EA group. On the Phonetically Regular Words of the Fry test, HSE class boys in the TM group were superior.

DISCUSSION

It would appear that as pupils continue to receive instruction in these prescribed language arts methods, the EA enhances achievement in those variables measured in the present study somewhat more than does the TM. Moreover, the EA seems to facilitate the achievement of girls slightly more than it does that of boys. The level of confidence in the differences observed also improves with time in instruction. In general, when exposure to these prescribed teaching methods is restricted to a single year, the number of significant differences appearing is comparable to the number appearing at the end of two years, but there are substantially fewer comparisons significant at the .01 level of confidence. The EA was clearly an effective method of instruction in the language arts. It appears also that achievement in other subject areas may be enhanced by the EA, as reflected in the superior performance of the LSE groups on the Science-Social Studies and Arithmetic Concepts tests of the Stanford Achievement Test.

TABLE 1

BOYS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	3	31.73	6.52	3	29.94	6.52	.04
Gilmore—Rate	3	85.41	15.79	3	56.59	15.79	1.64
Fry	3	12.68	7.20	2	14.48	9.18	.02
Gates	3	13.91	3.41	3	12.76	3.41	.06
Speaking—Number of Different Words (Post Minus Pre)	37	16.40	2.64	19	3.59	3.70	7.83**
Speaking—Total Number of Words (Post Minus Pre)	36	57.62	10.22	19	20.82	14.12	4.40*
Speaking—Ratio (Post Minus Pre)	36	-1.95	1.73	19	-2.66	2.39	.06
Speaking—Mean Sentence Length (Post Minus Pre)	36	2.77	.75	19	2.64	1.04	.01
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	36	4.29	1.01	19	4.56	1.39	.02
Speaking—Sentence Complexity (Post Minus Pre)	36	2.13	1.13	19	2.80	1.56	.12

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 1 (Continued)

BOYS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	56	13.18	.82	47	12.98	.90	.03
Stanford—Paragraph Meaning	57	20.20	1.43	47	19.53	1.58	.10
Stanford—Science and Social Studies	57	19.55	.55	47	16.69	.61	12.13**
Stanford—Spelling	52	8.12	.76	42	7.19	.84	.67
Stanford—Word Study	57	29.54	1.27	47	27.92	1.40	.73
Stanford—Language	57	29.84	1.16	47	30.81	1.28	.31
Stanford—Arithmetic Compute	56	15.89	1.28	45	17.57	1.15	.96
Stanford—Arithmetic Concepts	57	15.87	.88	47	14.52	.97	1.05
Listening (Post Minus Pre)	58	.80	.44	47	1.11	.49	.22

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 1 (Continued)

BOYS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	19	5.45	2.46	7	15.77	4.06	4.71*
Writing—Total Number of Words (Post Minus Pre)	19	7.15	3.85	7	24.16	6.34	5.25*
Writing—Mean Sentence Length (Post Minus Pre)	19	9.78	2.31	7	4.03	3.80	1.67
Writing—Complexity (Post Minus Pre)	13	-.58	2.21	6	-2.41	3.26	.22
Writing—Spelling (Post Minus Pre)	19	1.21	1.69	7	-1.44	2.79	.66
San Diego Pupil Attitude Inventory	57	15.19	.62	47	17.00	.68	3.83
Books Read Completely	53	4.80	.63	43	4.76	.70	.002
Books Read Partially	29	2.54	.60	16	3.27	.82	.51

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 1 (Concluded)

BOYS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups: Experience Approach N	Experience Approach Mean[1]	Experience Approach S.E.[2]	Traditional Method N	Traditional Method Mean[1]	Traditional Method S.E.[2]	F Ratio
Writing Sample—Running Words	3	46.47	20.72	3	23.19	20.72	.62
Writing Sample—Different Words	3	31.69	11.24	3	16.97	11.24	.84
Writing Sample—Words Spelled Correctly	3	41.15	19.64	3	21.52	19.64	.49
Writing Sample—Polysyllabic Words	1	----	----	3	----	----	----
Writing Sample—Mechanics Ratio Scale	3	84.60	7.80	3	72.40	7.80	1.20
Eagerness to Read	57	2.46	.17	47	2.29	.19	.42
Maturity of Reading Choices	57	2.45	.17	47	2.33	.19	.23

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 2

BOYS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	15	51.55	6.54	18	49.26	5.96	.07
Gilmore—Rate	15	73.15	4.18	18	71.27	3.81	.11
Fry	15	20.99	3.49	17	26.78	3.28	1.44
Gates	15	22.02	2.59	18	24.48	2.36	.49
Speaking—Number of Different Words (Post Minus Pre)	69	13.10	1.83	78	5.11	1.72	10.09**
Speaking—Total Number of Words (Post Minus Pre)	69	55.63	8.17	78	18.61	7.68	10.82**
Speaking—Ratio (Post Minus Pre)	69	-2.58	1.34	78	-2.10	1.26	.06
Speaking—Mean Sentence Length (Post Minus Pre)	69	1.30	.51	78	1.63	.48	.23
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	69	2.39	.84	78	2.65	.79	.05
Speaking—Sentence Complexity (Post Minus Pre)	68	.97	.68	78	.36	.64	.43

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 2 (Continued)

BOYS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	112	16.14	.66	129	17.19	.61	1.33
Stanford—Paragraph Meaning	113	25.09	1.12	130	29.80	1.05	9.38**
Stanford—Science and Social Studies	114	21.67	.46	130	20.61	.43	2.81
Stanford—Spelling	111	9.87	.67	127	10.90	.63	1.22
Stanford—Word Study	114	32.89	1.00	130	34.97	.94	2.28
Stanford—Language	114	33.12	.84	130	34.47	.79	1.38
Stanford—Arithmetic Compute	114	20.71	.80	127	21.26	.76	.25
Stanford—Arithmetic Concepts	114	18.63	.70	130	19.71	.65	1.27
Listening (Post Minus Pre)	114	.97	.29	130	.74	.28	.32

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 2 (Continued)

BOYS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	45	13.62	2.35	25	12.49	3.18	.08
Writing—Total Number of Words (Post Minus Pre)	45	18.51	3.05	25	13.44	4.11	.96
Writing—Mean Sentence Length (Post Minus Pre)	45	5.38	1.90	25	10.52	2.56	2.55
Writing—Complexity (Post Minus Pre)	33	5.23	1.70	21	7.17	2.14	.50
Writing—Spelling (Post Minus Pre)	45	-2.26	1.98	25	-2.94	2.67	.04
San Diego Pupil Attitude Inventory	114	15.71	15.69	130	.49	.46	.001
Books Read Completely	102	6.05	.80	124	7.07	.72	.88
Books Read Partially	61	2.79	.37	38	2.45	.47	.31

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 2 (Concluded)

BOYS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups: Experience Approach N	Mean[1]	S.E.[2]	Traditional Method N	Mean[1]	S.E.[2]	F Ratio
Writing Sample—Running Words	15	40.65	10.08	18	57.07	9.19	1.43
Writing Sample—Different Words	15	27.46	6.16	18	39.89	5.62	2.20
Writing Sample—Words Spelled Correctly	15	36.81	9.65	18	53.21	8.80	1.56
Writing Sample—Polysyllabic Words	13	4.47	2.18	18	9.72	1.85	3.33
Writing Sample—Mechanics Ratio Scale	15	77.98	2.89	17	87.43	2.71	5.63*
Eagerness to Read	114	2.77	.14	130	2.98	.13	1.22
Maturity of Reading Choices	114	3.14	.12	130	3.17	.11	.017

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 3

GIRLS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups Experience Approach			Traditional Method			F Ratio
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	5	57.72	7.77	7	45.05	6.25	1.25
Gilmore—Rate	5	67.02	8.01	7	85.27	6.44	2.45
Fry	5	37.21	8.32	7	22.28	6.69	1.51
Gates	5	30.45	3.91	7	22.54	3.14	1.92
Speaking—Number of Different Words (Post Minus Pre)	32	15.92	2.83	15	8.91	4.16	1.91
Speaking—Total Number of Words (Post Minus Pre)	32	79.51	11.42	15	29.91	16.77	5.90*
Speaking—Ratio (Post Minus Pre)	32	-5.22	1.74	15	-1.59	2.56	1.36
Speaking—Mean Sentence Length (Post Minus Pre)	32	2.45	.91	15	2.11	1.33	.04
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	32	4.15	1.41	15	4.94	2.07	.10
Speaking—Sentence Complexity (Post Minus Pre)	32	.29	.81	15	1.92	1.19	1.27

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 3 (Continued)

GIRLS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	47	15.19	.96	47	15.02	.96	.01
Stanford—Paragraph Meaning	47	25.11	1.57	48	24.19	1.55	.17
Stanford—Science and Social Studies	47	17.82	.62	48	15.13	.61	9.60**
Stanford—Spelling	45	10.24	.93	46	9.09	.92	.78
Stanford—Word Study	47	31.25	1.46	48	28.71	1.45	1.52
Stanford—Language	47	32.92	1.25	48	32.41	1.24	.08
Stanford—Arithmetic Compute	46	18.30	1.28	46	15.24	1.28	2.88
Stanford—Arithmetic Concepts	47	15.26	.81	48	12.83	.81	4.48*
Listening (Post Minus Pre)	47	1.62	.55	48	1.25	.54	.23

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 3 (Continued)

GIRLS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	1	----	----	10	2.20	16.26	----
Writing—Total Number of Words (Post Minus Pre)	1	----	----	10	-.90	32.26	----
Writing—Mean Sentence Length (Post Minus Pre)	1	----	----	10	3.59	13.32	----
Writing—Complexity (Post Minus Pre)	1	----	----	9	6.46	8.38	----
Writing—Spelling (Post Minus Pre)	1	----	----	10	-3.18	4.15	----
San Diego Pupil Attitude Inventory	47	18.25	.58	48	18.32	.57	.01
Books Read Completely	44	8.46	1.12	45	7.77	1.11	.19
Books Read Partially	29	3.15	.52	23	1.72	.58	3.34

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 3 (Concluded)

GIRLS—CONTINUING—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	5	98.77	12.60	7	28.88	10.13	14.48**
Writing Sample—Different Words	5	58.56	9.16	7	25.17	7.37	6.25*
Writing Sample—Words Spelled Correctly	5	85.70	11.91	7	25.79	9.57	11.92**
Writing Sample—Polysyllabic Words	5	-.49	8.61	7	23.20	6.92	3.57
Writing Sample—Mechanics Ratio Scale	5	79.25	8.50	6	86.79	7.40	.30
Eagerness to Read	47	2.91	.20	48	3.03	.19	.18
Maturity of Reading Choices	47	2.99	.18	48	2.78	.17	.74

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 4

GIRLS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

	Instructional Groups						
Experimental Variables	Experience Approach			Traditional Method			F Ratio
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	19	44.36	4.17	14	45.58	4.87	.04
Gilmore—Rate	19	77.58	4.02	14	75.93	4.69	.07
Fry	19	19.30	3.21	13	22.33	3.89	.36
Gates	19	19.42	1.96	14	23.44	2.28	1.78
Speaking—Number of Different Words (Post Minus Pre)	73	7.84	1.59	60	3.68	1.76	3.01
Speaking—Total Number of Words (Post Minus Pre)	73	45.45	6.62	60	9.24	7.31	13.24**
Speaking—Ratio (Post Minus Pre)	73	-3.74	.92	60	2.20	1.01	18.48**
Speaking—Mean Sentence Length (Post Minus Pre)	73	-.18	1.34	60	.10	1.48	.34
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	73	3.52	1.02	60	1.54	1.13	1.66
Speaking—Sentence Complexity (Post Minus Pre)	73	1.43	.77	60	.53	.85	.60

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 4 (Continued)

GIRLS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	116	17.21	.60	102	20.18	.64	11.33**
Stanford—Paragraph Meaning	116	28.26	1.02	102	34.03	1.09	14.83**
Stanford—Science and Social Studies	116	18.73	.48	102	18.81	.51	.01
Stanford—Spelling	111	11.13	.63	102	12.73	.66	3.00
Stanford—Word Study	116	32.88	.92	102	35.48	.98	3.70
Stanford—Language	116	35.10	.88	102	37.42	.94	3.28
Stanford—Arithmetic Compute	115	19.67	.76	102	22.79	.81	7.72**
Stanford—Arithmetic Concepts	116	17.88	.65	102	18.59	.69	.55
Listening (Post Minus Pre)	115	1.18	.35	101	.99	.37	.14

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 4 (Continued)

GIRLS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Experience Approach			Traditional Method			F Ratio
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	46	11.77	2.00	33	8.23	2.37	1.30
Writing—Total Number of Words (Post Minus Pre)	46	16.22	3.27	33	10.75	3.87	1.16
Writing—Mean Sentence Length (Post Minus Pre)	46	1.98	2.13	33	9.46	2.52	5.10*
Writing—Complexity (Post Minus Pre)	37	8.57	1.63	31	5.84	1.78	1.27
Writing—Spelling (Post Minus Pre)	46	-.67	1.64	33	-2.25	1.93	3.83
San Diego Pupil Attitude Inventory	116	18.27	.36	102	19.40	.38	4.48*
Books Read Completely	105	7.22	.92	100	9.46	.94	2.88
Books Read Partially	68	2.80	.34	33	4.11	.50	4.51*

Instructional Groups: Experience Approach; Traditional Method

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 4 (Concluded)

GIRLS—CONTINUING—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	19	42.63	5.53	14	44.00	6.45	.03
Writing Sample—Different Words	19	30.69	3.89	14	31.85	4.54	.04
Writing Sample—Words Spelled Correctly	19	35.05	5.43	14	38.93	6.33	.21
Writing Sample—Polysyllabic Words	15	5.99	.90	11	5.92	1.06	.003
Writing Sample—Mechanics Ratio Scale	19	76.08	3.63	14	85.03	4.24	2.55
Eagerness to Read	116	3.09	.13	102	3.18	.14	.22
Maturity of Reading Choices	116	3.33	.11	102	3.31	.12	.01

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 5

BOYS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups: Experience Approach N	Mean[1]	S.E.[2]	Traditional Method N	Mean[1]	S.E.[2]	F Ratio
Gilmore—Accuracy	3	33.75	9.07	5	28.55	6.61	.18
Gilmore—Rate	3	87.68	16.43	6	55.49	10.66	2.21
Fry	3	12.49	11.10	4	18.89	9.06	.14
Gates	3	32.86	8.97	6	11.57	5.82	3.24
Speaking—Number of Different Words (Post Minus Pre)	29	6.02	2.61	22	7.88	3.00	.22
Speaking—Total Number of Words (Post Minus Pre)	29	42.06	11.75	22	28.55	13.50	.57
Speaking—Ratio (Post Minus Pre)	29	-4.98	1.96	22	-3.20	2.26	.35
Speaking—Mean Sentence Length (Post Minus Pre)	29	1.67	.83	22	1.93	.96	.04
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	29	2.99	1.44	22	3.64	1.65	.09
Speaking—Sentence Complexity (Post Minus Pre)	29	4.71	.90	22	2.15	1.04	3.44

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 5 (Continued)

BOYS—NEW—LOWER SOCIO ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	42	13.83	.97	52	13.25	.87	.20
Stanford—Paragraph Meaning	43	20.15	1.67	52	21.28	1.52	.25
Stanford—Science and Social Studies	43	20.17	.74	52	17.82	.67	5.52*
Stanford—Spelling	38	8.45	1.07	49	8.41	.94	.001
Stanford—Word Study	43	28.01	1.18	52	28.97	1.07	.37
Stanford—Language	43	30.33	31.02	52	1.25	1.13	.17
Stanford—Arithmetic Compute	41	18.97	1.32	52	17.56	1.18	.63
Stanford—Arithmetic Concepts	43	16.80	.94	52	14.01	.85	4.86*
Listening (Post Minus Pre)	43	2.27	.62	50	2.21	.58	.004

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 5 (Continued)

BOYS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	12	1.87	1.94	16	7.79	1.67	5.22*
Writing—Total Number of Words (Post Minus Pre)	12	1.15	3.33	16	11.45	2.87	5.35*
Writing—Mean Sentence Length (Post Minus Pre)	12	2.66	3.07	16	6.82	2.65	1.02
Writing—Complexity (Post Minus Pre)	5	13.44	5.82	12	7.23	3.64	.77
Writing—Spelling (Post Minus Pre)	12	9.26	4.75	16	-5.57	4.10	5.46*
San Diego Pupil Attitude Inventory	43	14.96	.73	52	16.97	.67	4.18*
Books Read Completely	39	4.42	.80	48	6.20	.72	2.73
Books Read Partially	17	1.88	.27	20	1.80	.25	.05

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 5 (Concluded)

BOYS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	3	57.36	12.72	6	19.82	8.25	5.01
Writing Sample—Different Words	3	46.23	9.36	6	15.55	6.07	6.18*
Writing Sample—Words Spelled Correctly	3	36.70	8.41	6	16.65	5.45	3.27
Writing Sample—Polysyllabic Words	2	4.51	1.26	5	4.00	.75	.11
Writing Sample—Mechanics Ratio Scale	3	62.61	6.84	6	76.19	4.44	2.27
Eagerness to Read	43	2.19	.20	52	2.88	.18	6.69*
Maturity of Reading Choices	43	2.68	.19	52	2.86	.17	.45

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 6

BOYS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	16	41.45	4.04	10	38.47	5.13	.21
Gilmore—Rate	16	74.63	6.54	10	72.99	8.30	.02
Fry	16	18.91	2.72	8	30.31	3.87	5.74*
Gates	16	18.62	2.36	10	21.21	3.00	.45
Speaking—Number of Different Words (Post Minus Pre)	53	10.35	2.05	60	7.12	1.92	1.31
Speaking—Total Number of Words (Post Minus Pre)	53	51.77	7.69	60	19.10	7.22	9.47**
Speaking—Ratio (Post Minus Pre)	53	-2.25	1.03	60	1.68	.97	7.63**
Speaking—Mean Sentence Length (Post Minus Pre)	53	1.53	.66	60	.53	.62	1.20
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	53	3.17	.89	60	1.75	.83	1.34
Speaking—Sentence Complexity (Post Minus Pre)	52	2.31	.83	60	-.26	.77	5.09*

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 6 (Continued)

BOYS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Experience Approach N	Experience Approach Mean[1]	Experience Approach S.E.[2]	Traditional Method N	Traditional Method Mean[1]	Traditional Method S.E.[2]	F Ratio
Stanford—Word Meaning	92	14.70	.76	114	15.79	.68	1.14
Stanford—Paragraph Meaning	94	21.86	1.22	114	26.82	1.10	9.02**
Stanford—Science and Social Studies	94	20.63	.51	113	19.90	.47	1.11
Stanford—Spelling	84	9.07	.69	111	9.27	.60	.05
Stanford—Word Study	94	31.58	1.02	114	32.53	.92	.47
Stanford—Language	94	31.25	.96	114	33.62	.87	3.34
Stanford—Arithmetic Compute	94	19.04	.91	114	19.85	.83	.43
Stanford—Arithmetic Concepts	94	17.36	.70	113	16.94	.63	.20
Listening (Post Minus Pre)	94	2.31	.41	112	3.14	.38	2.20

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 6 (Continued)

BOYS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean^1	S.E.^{2}	N	Mean^1	S.E.^{2}	
Writing—Number of Different Words (Post Minus Pre)	30	10.72	1.98	36	8.15	1.81	.90
Writing—Total Number of Words (Post Minus Pre)	30	16.72	3.40	36	11.76	3.10	1.15
Writing—Mean Sentence Length (Post Minus Pre)	30	3.89	2.86	36	5.12	2.61	.10
Writing—Complexity (Post Minus Pre)	20	9.46	2.32	30	2.30	1.89	5.64*
Writing—Spelling (Post Minus Pre)	30	.53	2.41	36	-2.20	2.20	.69
San Diego Pupil Attitude Inventory	93	14.81	.52	114	16.36	.47	4.78*
Books Read Completely	88	4.36	.84	107	6.30	.77	2.87
Books Read Partially	46	1.98	.34	38	2.42	.37	.79

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 6 (Concluded)

BOYS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	16	47.18	7.77	10	37.41	9.86	.60
Writing Sample—Different Words	16	34.69	5.86	10	28.90	7.43	.37
Writing Sample—Words Spelled Correctly	16	38.87	6.56	10	32.68	8.32	.34
Writing Sample—Polysyllabic Words	14	7.05	1.73	9	6.81	2.16	.01
Writing Sample—Mechanics Ratio Scale	16	85.01	2.28	10	84.18	2.90	.05
Eagerness to Read	94	2.51	.14	114	2.76	.13	1.71
Maturity of Reading Choices	94	2.80	.13	114	2.81	.12	.00

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 7

GIRLS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean^1	S.E.^{2}	N	Mean^1	S.E.^{2}	
Gilmore—Accuracy	5	65.36	10.02	5	40.64	10.02	2.88
Gilmore—Rate	5	71.30	8.20	5	86.49	8.20	1.62
Fry	5	30.25	5.35	5	16.75	5.35	3.02
Gates	5	28.55	3.54	5	20.45	3.54	2.49
Speaking—Number of Different Words (Post Minus Pre)	31	7.83	2.28	10	11.21	4.06	.52
Speaking—Total Number of Words (Post Minus Pre)	31	45.08	13.61	10	27.64	24.23	.39
Speaking—Ratio (Post Minus Pre)	31	-2.10	1.47	10	1.92	2.62	1.76
Speaking—Mean Sentence Length (Post Minus Pre)	31	2.58	.79	10	2.79	1.40	.02
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	31	2.41	1.15	10	3.73	2.06	.31
Speaking—Sentence Complexity (Post Minus Pre)	31	3.88	1.19	10	.57	2.13	1.82

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 7 (Continued)

GIRLS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	45	15.61	1.03	39	14.55	1.11	.47
Stanford—Paragraph Meaning	44	25.00	1.68	39	25.36	1.79	.02
Stanford—Science and Social Studies	45	18.48	.72	39	16.09	.77	5.06*
Stanford—Spelling	45	11.47	1.04	37	9.45	1.15	1.67
Stanford—Word Study	45	30.71	1.44	39	31.84	1.55	.28
Stanford—Language	45	31.44	1.37	39	34.18	1.47	1.82
Stanford—Arithmetic Compute	45	19.80	1.12	38	17.85	1.22	1.37
Stanford—Arithmetic Concepts	45	16.06	.85	39	13.57	.92	3.92
Listening (Post Minus Pre)	44	2.65	.70	39	3.13	.74	.22

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 7 (Continued)

GIRLS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	14	11.01	3.51	8	4.85	5.07	.77
Writing—Total Number of Words (Post Minus Pre)	14	19.65	6.71	8	9.74	9.69	.55
Writing—Mean Sentence Length (Post Minus Pre)	14	13.28	3.01	8	.88	4.34	4.27
Writing—Complexity (Post Minus Pre)	13	8.82	2.66	8	.91	3.69	2.27
Writing—Spelling (Post Minus Pre)	14	3.07	2.07	8	-2.91	3.00	2.06
San Diego Pupil Attitude Inventory	45	18.44	.60	39	18.54	.65	.01
Books Read Completely	41	6.78	.95	35	7.40	1.03	.19
Books Read Partially	23	1.37	.81	14	4.53	1.04	5.63*

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 7 (Concluded)

GIRLS—NEW—LOWER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	5	49.08	11.29	5	18.32	11.29	3.51
Writing Sample—Different Words	5	33.33	9.29	5	13.47	9.29	2.17
Writing Sample—Words Spelled Correctly	5	41.63	10.94	5	15.97	10.94	2.61
Writing Sample—Polysyllabic Words	5	6.29	1.43	5	3.31	1.43	2.05
Writing Sample—Mechanics Ratio Scale	5	79.71	6.75	5	77.09	6.75	.07
Eagerness to Read	45	3.01	.20	39	3.02	.21	.001
Maturity of Reading Choices	45	3.17	.17	39	2.83	.19	1.85

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 8

GIRLS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Gilmore—Accuracy	19	54.42	4.14	21	40.09	3.94	6.27*
Gilmore—Rate	19	72.91	3.91	21	75.46	3.72	.22
Fry	19	27.52	3.06	18	21.56	3.14	1.85
Gates	19	25.14	1.88	21	21.01	1.79	2.51
Speaking—Number of Different Words (Post Minus Pre)	37	9.69	2.18	64	4.41	1.65	3.64
Speaking—Total Number of Words (Post Minus Pre)	37	63.90	9.78	64	14.25	7.39	16.03**
Speaking—Ratio (Post Minus Pre)	37	-4.33	1.52	64	1.16	1.15	8.14**
Speaking—Mean Sentence Length (Post Minus Pre)	37	2.62	.83	64	.48	.62	4.18*
Speaking—Mean Sentence Length (five longest) (Post Minus Pre)	37	2.47	1.51	64	1.34	1.14	.35
Speaking—Sentence Complexity (Post Minus Pre)	37	2.79	1.09	64	.72	.83	2.23

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 8 (Continued)

GIRLS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Stanford—Word Meaning	82	17.86	.74	145	19.05	.56	1.65
Stanford—Paragraph Meaning	82	29.78	1.22	145	32.60	.92	3.43
Stanford—Science and Social Studies	82	19.44	.52	145	18.38	.39	2.62
Stanford—Spelling	80	12.68	.75	144	12.28	.56	.18
Stanford—Word Study	82	36.96	1.10	145	34.96	.83	2.10
Stanford—Language	82	36.99	.95	145	37.26	.71	.05
Stanford—Arithmetic Compute	82	23.34	.97	144	21.50	.73	2.28
Stanford—Arithmetic Concepts	82	18.96	.71	144	17.88	.53	1.49
Listening (Post Minus Pre)	82	2.00	.43	143	3.37	.33	6.33*

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 8 (Continued)

GIRLS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing—Number of Different Words (Post Minus Pre)	23	8.89	3.05	59	12.21	1.90	.85
Writing—Total Number of Words (Post Minus Pre)	23	14.80	3.04	59	10.59	4.88	.53
Writing—Mean Sentence Length (Post Minus Pre)	23	7.11	1.97	59	5.45	1.23	.52
Writing—Complexity (Post Minus Pre)	32	10.04	1.78	55	5.80	1.35	3.58
Writing—Spelling (Post Minus Pre)	23	-2.13	1.52	59	-1.39	.95	.17
San Diego Pupil Attitude Inventory	82	18.06	.46	137	19.29	.35	4.59*
Books Read Completely	79	6.18	1.39	128	10.24	1.09	5.28*
Books Read Partially	46	2.18	.31	48	2.64	.31	1.04

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 8 (Concluded)

GIRLS—NEW—HIGHER SOCIO-ECONOMIC GROUP

Experimental Variables	Instructional Groups						F Ratio
	Experience Approach			Traditional Method			
	N	Mean[1]	S.E.[2]	N	Mean[1]	S.E.[2]	
Writing Sample—Running Words	19	47.37	11.54	21	61.95	10.98	.84
Writing Sample—Different Words	19	32.56	7.00	21	41.31	6.66	.82
Writing Sample—Words Spelled Correctly	19	41.46	8.33	21	50.10	7.92	.56
Writing Sample—Polysyllabic Words	18	7.17	3.77	20	14.00	3.57	1.70
Writing Sample—Mechanics Ratio Scale	19	84.14	2.98	20	79.82	2.90	1.08
Eagerness to Read	37	3.24	.24	145	3.10	.12	.27
Maturity of Reading Choices	82	3.41	.12	145	3.18	.09	2.30

[1] Adjusted for group differences in chronological age and Pintner-Cunningham raw score.

[2] Standard error of the adjusted mean.

*Significant at the .05 level.

**Significant at the .01 level.

APPENDIX A

MEASURES OF PROFICIENCY

MEASURES OF SPEAKING PROFICIENCY

The development of various attributes of children's oral language has been studied quite extensively. The analysis of very large samplings of young children's speech is not common, however, because of the tedious and time-consuming nature of the sampling task. Previous studies have usually taken fairly long samples of individual children's speech. Oral responses have been evoked in several ways; for example, in conversation with peers or adults, in children's verbal descriptions of pictures or objects, or in some enumeration task of a structured nature. In the present research it was decided to study the speech of as many of the children participating as possible without incurring the time delay and expense of analyzing hour-long samples or attempting to collect forty or fifty responses per child as other investigators have done.

For this project, the following analyses were made of the speech of approximately half of the total pupil population: Number of Different Words, Total Number of Words, Ratio — Number of Different Words to Total Number of Words, Mean Sentence Length, Mean Length of the Five Longest Sentences, and a Sentence Complexity Score derived in the manner described by Templin.[14]

Two-minute samples of children's conversation with the project coordinator were recorded on tape, from which typescripts were made. The typists were instructed to ignore punctuation, that is, to make no attempt to determine where a "sentence" began or ended, and to attempt to represent the language of the child, leaving spaces to indicate pauses. Four selected college students were trained in analysis procedures. Following the rules laid down by previous investigators (see Appendix B), each analyst made independent judgments of the variables to be measured. To determine the consistency of the four raters, partial reliability studies were made. High levels of agreement were obtained.

It appeared that very satisfactory reliabilities could be achieved for the analysis of children's recorded speech for the attributes cited using college students who had received some task training.

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[14] Templin, Mildred C. Certain Language Skills in Children. The University of Minnesota Press, 1957.

MEASURES OF WRITING PROFICIENCY

A sample of each pupil's writing was collected monthly throughout the school year. Both treatment groups were presented story topics to stimulate written expression.

For this research, the following analyses were made of approximately one-third of the total population: Number of Different Words, Total Number of Words, Mean Sentence Length, Spelling, and a Sentence Complexity Score derived in the manner described by Templin.[15]

Selected college students were trained to make the analyses. Following training, practice sessions were provided. A random sample of raters' judgments was then drawn and checked for accuracy by the project staff. Thereafter the raters proceeded independently with their analyses of the variables to be measured.

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[15] Ibid.

MEASURE OF LISTENING PROFICIENCY

The measure of Listening Proficiency used for the first grade study was revised to obtain an adequate ceiling for the increased maturity of the second grade subjects. Two equivalent forms were again available.

Although there is clearly face validity in this type of test, it is equally obvious that "listening" cannot be separated from the other variables in the task, such as span of attention and interest and cognitive factors—particularly level of vocabulary comprehension. The ability of the measure to reflect growth, which was verified, implies an element of construct validity.

APPENDIX B

INSTRUMENTS USED IN THE STUDY

APPENDIX III. RULES FOLLOWED FOR CLASSIFICATION OF WORDS AND SENTENCES

A. RULES FOR COUNTING NUMBER OF WORDS*

1. Contractions of subject and predicate like "it's" and "we're" are counted as two words.
2. Contractions of the verb and the negative such as "can't" are counted as one word.
3. Each part of a verbal combination is counted as a separate word: thus "have been playing" is counted as three words.
4. Hyphenated and compound nouns are one word.
5. Expressions which function as a unit in the child's understanding were counted as one word. Thus "oh boy," "all right," etc. were counted as one word, while "Christmas tree" was counted as two words.

B. CLASSIFICATION OF SENTENCE STRUCTURE FROM DAVIS (5:82) AFTER McCARTHY

I. Complete sentences.
  - A. Functionally complete but structurally incomplete. This includes naming; answers in which omitted words are implied because they were expressed in the question; expletives; and other remarks, incomplete in themselves, which are clearly a continuation of the preceding remark.
  - B. Simple sentence without phrase.
  - C. Simple sentence containing (1) phrase used as adjective or adverb in apposition, (2) compound subject or predicate, (3) compound predicate.
  - D. Complex sentence (one main clause, one subordinate clause) with (1) noun clause used (a) as subject, (b) as object, (c) in apposition, (d) as predicate nominative, (e) as objective complement; (2) adjective clause (a) restrictive, (b) nonrestrictive; (3) adverbial clauses of (a) time, (b) place, (c) manner, (d) comparison, (e) condition, (f) concession, (g) cause, (h) purpose, (i) result; (4) infinitive.
  - E. Compound sentence (two independent clauses).
  - F. Elaborated sentence; (1) simple sentence with two or more phrases, or compound subject, or predicate and phrase; (2) complex sentence with more than one subordinate clause, or with a phrase or phrases; (3) compond sentence with more than two independent clauses, or with a subordinate clause or phrases.

II. Incomplete sentences.
  - A. Fragmentary or incomprehensible. Example: "Well – not this, but –."
  - B. (1)Verb omitted completely, (2) auxiliary omitted, verb or participle expressed, (3) verb or participle omitted, auxiliary expressed.
  - C. Subject omitted, either from main or subordinate clause.
  - D. Introducutory "there" omitted.
  - E. Pronoun other than subject of verb omitted.
  - F. Preposition (usually needed sign of infinitive) omitted.
  - G. Verb and subject omitted.
  - H. Main clause incomplete, subordinate clause or second clause of compound sentence complete.
  - I. Main clause complete, subordinate or second clause incomplete. Example: "I know why."
  - J. Omissions from both main and subordinate clauses.
  - K. Essential words present, but sentence loosely constructed because of (1) omission of conjunction, (2) insertion of parenthetical clause, (3) changes in form halfway in sentence. Example: "We have – my brother has a motorcycle."
  - L. (1) Definite, (2) indefinite article omitted.
  - M. Object omitted from either main clause or prepositional phrase.
  - N. Sentence left dangling.

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*Adapted by Davis (5:44) from McCarthy (27:36).

AN INVENTORY OF READING ATTITUDE

(Standardization Edition)

Name ________________________________ Grade ________ Boy Girl
Last First Middle
School ________________________ Teacher ____________________

Date of Test ______________________
Mo. Day Yr.

TO BOYS AND GIRLS:

This sheet has some questions about reading which can be answered YES or NO. Your answers will show what you usually think about reading. After each question is read to you, circle your answer.

INSTRUCTIONS TO PUPILS

Draw a circle around the word YES or NO, whichever shows your answer.

Sample A

Yes No Do you like to read?

If you like to read, you should have drawn a circle around the word YES in Sample A; if you do not like to read, you should have drawn a circle around the word NO.

Sample B

Yes No Do you read as well as you would like to?

If you read as well as you would like to, you should have drawn a circle around the word YES in Sample B; if not, you should have drawn a circle around the word NO.

Yes No 1. Do you like to read before you go to bed?

Yes No 2. Do you think that you are a poor reader?

Yes No 3. Are you interested in what other people read?

Yes No 4. Do you like to read when your mother and dad are reading?

Yes No 5. Is reading your favorite subject at school?

Yes No 6. If you could do anything you wanted to do, would reading be one of the things you would choose to do?

Yes No 7. Do you think that you are a good reader for your age?

Yes No 8. Do you like to read catalogs?

Yes No 9. Do you think that most things are more fun than reading?

Yes No 10. Do you like to read aloud for other children at school?

Yes No 11. Do you think reading recipes is fun?

Yes No 12. Do you like to tell stories?

Yes No 13. Do you like to read the newspaper?

Yes No 14. Do you like to read all kinds of books at school?

Yes No 15. Do you like to answer questions about things you have read?

Yes No 16. Do you think it is a waste of time to make rhymes with words?

Yes No 17. Do you like to talk about books you have read?

Yes No 18. Does reading make you feel good?

Yes No 19. Do you feel that reading time is the best part of the school day?

Yes No 20. Do you find it hard to write about what you have read?

Yes No 21. Would you like to have more books to read?

Yes No 22. Do you like to read hard books?

Yes No 23. Do you think that there are many beautiful words in poems?

Yes No 24. Do you like to act out stories that you have read in books?

Yes No 25. Do you like to take reading tests?

MEASUREMENT OF SOCIO-ECONOMIC CLASS

Socio-economic class was measured with the scale developed by Richard Centers in his study Psychology of Social Classes[1]. This scale assesses three dimensions of socio-economic class: occupation, power, and economic status. The three dimensions have been combined to produce one value describing socio-economic class. (Note: Centers himself relied on occupation alone in many instances.) Scale values for the three dimensions are described in Table 7.

TABLE 7[1]

Scale Values of Categories of the Three Stratification Variables Which Are Combined in a Single Stratification Scale

Scale Value	Occupation	Scale Value	Power Dominance-Subordination	Scale Value	Economic Status
8	Large Business	8	Employer	8	Wealthy
7	Professional	7		7	
6	Small Business	6	Manager	6	Average Plus
5	White Collar Workers	5		5	
4	Farm Owners and Managers	4	Independent	4	Average
3	Skilled Workers and Foremen	3		3	
2	Farm Tenants	2	Tenant	2	Poor Plus
1	Semiskilled Workers	1		1	
0	Unskilled and Farm Labor	0	Employee	0	Poor

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[1] Centers, Richard. The Psychology of Social Classes: A Study of Class Consciousness. Russell and Russell, 1961, p. 51. Originally published by Princeton University Press, 1949.

Department of Education, San Diego County
Research Project

SOCIO-ECONOMIC CLASS

The research design for the San Diego County study requires information on the socio-economic class as one of several predictor variables. From the information included in your cumulative record folder, we hope that three major questions can be answered. Using the following scale of value, derive a socio-economic score for each child in your classroom.

Scale of Values

A.

Civilian Occupation	Military Occupation
Large business—8 points	
Professional—7 points	Colonel or above
Small business—6 points	
White collar—5 points	Other Commissioned Officers
Farm owner or manager—4 points	
Skilled worker or foreman—3 points	Ranks above Corporal (Seaman 1st)
Farm tenant—2 points	
Semiskilled worker—1 point	Corporal (Seaman 1st) and below
Unskilled or farm labor—0	

B.

Power	
Employer—8 points	Colonel or above
Manager—6 points	Other Commissioned Officers
Independent—4 points	Ranks above Corporal (Seaman 1st)
Tenant—2 points	Corporal (Seaman 1st) and below
Employee—0	

C.

Economic	
$20,000 or more—8 points	Lt. General (Vice-Admiral) or above
9,000-19,000—6 points	Col. to Major Gen. (Rear Adm.)
5,000- 8,999—4 points	2nd Lt. (Ensign) to Lt. Col. (Cdr.)
3,000- 4,999—2 points	Ranks below 2nd Lt. (Ensign)
Less than 3,000—0	

Example:

Name	Occupation	Power	Economic	Total
John Smith	5	4	6	15

John Smith's father sells insurance, owns his own business, makes between $9,000 and $19,000 yearly.

Phonetically Regular Words Oral Reading Test

1966 Version

Edward Fry, Rutgers University
New Brunswick, N. J.

Name____Date____________________

School____________________________Room________Code Number__________________

Examiner__________________________Number of words read correctly______________

1. nap
2. pen
3. hid
4. job
5. rug
6. shade
7. drive
8. joke
9. mule
10. plain
11. hay
12. keen
13. least
14. loan
15. slow
16. stalk
17. haul
18. jaw
19. soil
20. joy
21. frown
22. trout
23. term
24. curl
25. birch
26. rare
27. star
28. porch
29. smooth
30. shook
31. yoke
32. glory
33. shy
34. quaff
35. taught
36. bundle
37. nix
38. civic
39. Philip
40. preach
41. cracked
42. swish
43. frankfurter
44. twelfth
45. drowse

DIRECTIONS TO EXAMINER: Have pupil read words from one copy while you mark another copy. Do not give pupil a second chance, but accept immediate self-correction. Let every pupil try the whole first column. If he gets two words correct from word number six on, let him try the whole second column. If he gets three words correct, let him try the whole third column. Mark correct words C and incorrect words X.

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GATES WORD PRONUNCIATION TEST

EXAMINER'S COPY

DIRECTIONS: Have the child read the words out loud. Tell him you would like him to read some words for you. If he fails the first time, ask him to try the word again. Continue until ten consecutive words have been missed. As the words become difficult, special care should be taken to encourage the child. The score is one point for each word correctly pronounced on the first trial, one-half point for each word correctly pronounced on the second trial. (Note: 9½ correct would be scored as 10.)

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1. so
2. we
3. as
4. go
5. the
6. not
7. how
8. may
9. king
10. here
11. grow
12. late
13. every
14. about
15. paper
16. blind
17. window
18. family
19. perhaps
20. plaster
21. passenger
22. wander
23. interest
24. chocolate
25. dispute
26. portion
27. conductor
28. brightness
29. intelligent
30. construct
31. position
32. profitable
33. irregular
34. schoolmaster
35. lamentation
36. community
37. satisfactory
38. illustrious
39. superstition
40. affectionate

Child's name: ______________________________ Test date ___ ___ ___

Examiner: ______________________________ Birth date ___ ___ ___

Age: _______

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